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An Address.[1]

By C. E. WASSELL,

President of the Queensland Branch of the British Medical Association, Brisbane.

My first duty and pleasure on assuming office as your President is to express, on your behalf as well as my own, gratitude to Dr. Neville Sutton for his devotion to the interests of the Branch during his term of office, appreciation of his readiness at all times to be of service to the profession and the community, and a lively hope that he will grace our assemblies for many years to come and bring to our problems his wise counsel and mature judgement..

Custom demands that your incoming President should address you, but custom has also decreed that the subject shall be of his own choosing. The choice on this occasion has not been difficult, for the British Commonwealth of Nations is at war, and we as practitioners of medicine carry a grave responsibility, whether we serve in the field or at home.

[1] Delivered at the annual meeting of the Queensland Branch of the British Medical Association on December 8, 1939, at Brisbane.

Activities of the Branch.

However, I feel that I should touch very briefly upon the high lights of the past year before I start my theme. I would commend for your serious study the annual report, which is already in your hands, as this gives an excellent idea of the activities of your council, which have been varied and strenuous; and I feel justified in stating that the activities of the council on behalf of the members of the Association are always greater than those of the members of the Association themselves, and any complaints on this aspect of our work would appear to me to be boomerangs which really criticize the general body of members. In this respect I think the past year has shown a very gratifying awakening of interest in our own affairs,

which has been most marked at the beginning and the end of the year.

At this time last year, you remember, there had just been completed a great reorganization of the Brisbane Hospital, the refugee question was already a problem, and we were in the throes of an effort to mould the proposed national health insurance bill of the Commonwealth Government into a form which would be both of value to the community and acceptable to the medical profession. Although the bill has been definitely shelved, you must not think that our efforts were fruitless. There is no doubt that the issue will again be raised at a future date, and the mass of evidence that we produced and the representations we made on this occasion undoubtedly had the effect of modifying very considerably the ideas previously held by the Commonwealth authorities, who were in the process of shaping a bill to a form very different from that in which it was originally presented. The members of the council are indeed grateful to the many members who at the cost of considerable time and effort gave evidence before the commission.

In this activity again the Branch owes a great debt of gratitude to Dr. T. A. Price, who, in his usual thorough manner, devoted practically all his time for several months to the protection of our interests. And indeed he has continued this work and is at present engaged in an effort to establish a Commonwealth-wide agreement between the medical proession and the friendly societies, which, if brought to a successful issue, you can readily understand, will be of immense value to both these bodies in any future discussion on health insurance.

Our Association, in keeping with the spirit of the day and in conformity with the ideals of service of our profession, has constituted a fees tribunal whose duty is to decide the fair contract between doctor and patient.

Of the new *Medical Act* of Queensland I shall say little but that it contains several innovations and that it is important that every medical practitioner make himself acquainted with its provisions as soon as possible. The council did its utmost, in the short time at its disposal, to modify several of these provisions so that they might be more in accord with the accepted principles of medical practice. On the whole it was not very successful; but we still think that the act will require amendment, as some clauses appear to be impracticable.

News of the outbreak of war found us on the evening of Sunday, September 3, actually holding a meeting for the purpose of considering proposals brought forward by the council for the equalization of sacrifice and the protection of practices of such men as might be called up for military service. You will always remember that meeting as the largest and most enthusiastic ever held in this State; you will remember its enthusiasm and its atmosphere of promises and pledges.

Equalization of sacrifice was the one theme chanted in such splendid unison that sacrifice seemed a pleasant and desirable thing.

Your council, in pursuance of the mandate which this occasion bestowed on it, has prepared the sacrifice, and offers it to you in rather smaller degree than was first contemplated. Two schemes are recommended: for large enough groups a scheme of limited contributions and benefits, and for small groups, such as exist in country centres, a pooling scheme. It seems that these schemes are reasonable, moderate and safe. It is hard to imagine how, remembering the vows of September 3, any one of our members eligible to participate and enjoying normal success in his practice can decline to join and help.

And now it would appear that a severe trial lies before us all, and our task demands the whole energy of each one of us. Clearly it would be impossible in the short time at my disposal to touch on every aspect of the work of a medical practitioner in relation to the prosecution of the war. For me to attempt a complete survey of even the more obvious of our activities would be a severe trial of your patience and a still more severe test of my ability. I propose, therefore, to confine my remarks to several aspects of this vast subject, which appear to me of great importance and to which I have given some thought.

Officers of the Army Medical Corps and their Duties.

Let me first of all summarize the special duties with which the officers of the army medical corps are charged. They are: (i) the medical examination of recruits; (ii) the recommendation to general and other officers commanding, verbally or in writing, of any precautionary or remedial measures which will in their opinion conduce to the preservation of the health of troops and prevention of disease in the army; (iii) the professional treatment and care of the sick and wounded, including their collection and evacuation when necessary; (iv) dental care of the soldier and provision and repair of artificial dentures; (v) administration of all medical units and advice as to their location; (vi) the supply and replenishment of all medical equipment.

This is a very wide reference; and when you consider that, in addition to the above, food, clothing, warmth, accommodation, pay, discipline and transportation of enormous numbers have to be arranged, you will appreciate what a very large organization is the medical service in war time. Perhaps enough stress is not laid on another function of the medical services, and that is their great agency of reinforcement. Rapid evacuation and rapid return to duty of men who have been already trained constitute great conservation of man power and may make all the difference between success and failure. It cannot be too strongly emphasized that the responsibility of the preservation of the fitness of the troops does not lie with the medical service, but with the commander of every formation and unit in the field; it is one of the most important responsibilities of command. The medical service gives advice to the commanders as to how this is best done.

The following figures from the war of 1914 to 1918 tell convincingly what a gigantic effort was made and how well the above charges were fulfilled by the Royal Army Medical Corps, in association with which our own Australian Army Medical Corps played its full part. They will also dispel any illusion that we sit in comfort and safety.

The Royal Army Medical Corps expanded from 3,168 officers and 16,331 men before the War to 13,063 officers and 131,099 men in August, 1918—a grand total of 144,162, which is almost as large as the total strength of the British Expeditionary Force in August, 1914. The grand total of hospital beds equipped was 364,133, and the grand total of all casualties dealt with was 11,096,338. This figure does not include those men killed in battle, missing or taken prisoner. Of the above casualties, 3% died, 5% were invalided, 12% were returned to duties of a light nature, and no less than 8,053,908, or 78%, were returned to front line duty. In this effort the casualties sustained by officers and men of the corps were the following: 470 officers and 3,569 other ranks were killed or died of wounds.

The motto of that corps, *"In arduis fidelis"*, is therefore no idle boast.

The smooth running of the tremendous machine responsible for the above results was in part due to the elastic constitution of medical units, all of which are designed to cope with "peak periods". Another secret of success lay in the very rapid evacuation of casualties. In one of the large battles in France (Passchendaele) the first casualties were in bed in England less than twelve hours after being wounded.

Medical Examination of Recruits.

The selection of recruits for active service is in the hands of the medical profession. Unless the selection is wisely made, the efficiency of the war machine may be impaired, lives may be unnecessarily sacrificed and public moneys wasted. Many of us will have to examine recruits, and we must realize that a great deal more than a cursory examination is needed before a recruit can be accepted as fit for service. I must emphasize at once that too great care cannot be taken in the first examination of recruits. It is to be realized that medical examination of recruits is the first step in sanitation, because a man who is physically unsound, although he may manage to carry out peace-time duties, will inevitably break down under service conditions. He will either be found unfit on mobilization or he will be a perpetual nuisance to his regiment as long as he remains with it; and he will eventually be one of the number who help to fill up the hospitals. He will be of no use to anyone, and the medical officer who passed him may have to bear his share of the burden.

In November a paper on this subject was read before the Victorian Branch of the British Medical Association by Major Eric Cooper, "The Place of the Medical Man in the Preparation of an Army for War". I have read this paper and also the discussion which followed its reading. These will be published shortly in THE MEDICAL JOURNAL OF AUSTRALIA, and I would ask every one of you to read them. The subject was so well covered by Major Cooper that I need not traverse it again.

I would, however, lay stress on a few points that the examining officer should keep in mind. A definite standard has been laid down and instructions for medical examination have been issued in pamphlet form. We must adhere to these rigidly and not allow ourselves to be swayed by any other considerations, such as personal knowledge of or friendly feeling towards the recruit.

Many instances will arise in which outside influences are brought to bear. For example, a commanding officer particularly desires that a certain recruit be passed because of some special qualifications—he is known to be a good cook and his glass eye does not interfere with his ability to cater for the gastronomical requirements of the officers' mess. We must harden our hearts and adhere to the standard requirements and, remembering that the expression "all hands and the cook" has a sound foundation, realize that this man at any moment may be called upon to fight.

Then again, a unit commander may consider the services of some particular individual to be not indispensable and may submit this fact to the examining officer or medical board, expecting his rejection. Again we must be firm and judge the case on medical grounds and on medical grounds alone; the man is fit or he is not fit, according to the standard. Whether he is acceptable to the unit or not is none of our business and is entirely out of the jurisdiction of the medical service; we must not allow ourselves to be "put upon".

Yet another thing to guard against is the speeding up of your examination when there is a large number of recruits waiting or when the area or attesting officer, being anxious to complete a draft as quickly as posible, urges haste; or again, when the commanding officer is misdirectedly over-anxious to get his men through the examination in order to commence their training. The very best of examiners will at times find that they tend to hurry unless they keep a close check on themselves and do not allow the above factors or the call of their private practice to influence them.

The medical examination of recruits for military service presents similar problems to medical examinations of proponents for life insurance; but there are several important differences. Impersonation has been practised occasionally, but this must be rare. Inaccurate histories of previous illnesses are fairly often given; occasionally evidence is available to detect such an inaccuracy, but often a disability is discovered only when the recruit is unable to carry out normal military routine duties. Alimentary disabilities, such as intermittent indigestion or diarrhœa, have been denied at the first examination; but as soon as the recruit is unable to give special care to his diet he suffers from further attacks and has to be boarded as unfit.

The routine medical examination must be conducted in a good light, in the best room available

to give privacy with suitable temperature and ventilation. The man must be stripped and a careful examination must be made of his general physical development, particular attention being paid to deformities and expansion of the chest, deformities of the spine, feet and hands, and ensuring that he has no limitation of movement of any joints. Scars and marks are carefully noted. A careful examination is made of his mouth, gums, throat, nose, ears and chest; and hernia, varicocele, undescended testis, varicose veins and hæmorrhoids are looked for. Thorough examination of the feet for corns, callosities, bunions and hammer toe is made, and the man should stand on tiptoe and also stand on his heels with toes off the ground to eliminate flat feet and *pes cavus*. The blood presure should be taken with the subject in the recumbent position and recorded, and the urine should be tested for albumin and for sugar in all cases. Vision should be tested and the chest measurements should be taken by the examining medical officer himself.

While it is true that some defects may be detected only by special investigations, such as X ray or blood examinations *et cetera*, it is possible to eliminate most disabilities by painstaking clinical examination. Full use should, however, be made of the facilities given for specialists' opinions.

The importance to be attached to particular disabilities can be determined only after careful statistical surveys of large numbers of recruits before and after active military service; the more accurately notes are made on medical history sheets, the more useful will be any such survey. At present the importance to be attached to various abnormalities is based partly on observations of officers on active service and on figures from the Repatriation Department and partly on the statistics available from insurance companies. The serious difficulty with regard to statistics from insurance companies is that they are concerned mainly with the expectation of life of proponents, whereas the military services are concerned with a man's ability to continue his military duties under active service conditions.

Most medical officers are quite conscientious according to their own lights; but it is noticeable when the findings of the second examination are recorded that some medical officers take the attitude: "This man has voluntarily offered his services and should not be discouraged or have his feeling hurt by being turned down." This is wrong; the medical officer is the servant of the Government and must make the Government, not the individual, his first consideration.

A few medical officers, however, do not err from leniency to the recruit, but have been obviously careless in not making a full examination.

Blindness in one eye has been entered in the "D.1" as $^{6}/_{6}$ or $^{6}/_{12}$ vision; huge scrotal herniæ were passed; obvious endocarditis with failure was not detected; men who were below the standard of height were frequently passed, as well as several who were over age fifty-three years. One man I saw could not bring his front teeth together and was seriously undernourished in consequence; he weighed only 109 pounds. In all, about 200 men were marked unfit on the second examination; this is about 6% of the total, and has entailed huge expense in returning men to their homes *et cetera*, as well as much loss to men who had given up jobs, and general dissatisfaction among the public, who in the end pay for our mistakes. The percentage of rejects on second examination in New South Wales and Victoria was roughly only 3%; in Western Australia it was 2·6%.

Of course the medical officers are not entirely to blame. The staff arrangements at the start were most unsatisfactory, mainly because we rushed into examination before staff arrangements were completed. Also our State is very widely scattered, and this makes staff coordination difficult. However, there was on the whole a much better examination, or better material, in the country than in the metropolis.

The personal factor comes in again in regard to the second examination. The boards may err on the side of severity rather than that of leniency as practised by the original examiners.

Full cognizance being given to the arduous work, deprivations and trying conditions that troops are called upon to undergo in the field, a little self-catechism may be of great help to a medical officer when he is doubtful about passing a particular recruit as "Class I". Let him imagine himself to be the medical officer of a unit in the field and then ask himself the following question: "Should I be satisfied to have 50 such men as this one to look after in my unit and take the responsibility of maintaining their health and physical fitness?" The answer to this question will indicate whether to pass or reject that particular recruit.

The Regimental Medical Officer and his Duties.

Another subject that has engaged my attention is the work of a regimental medical officer. He is to the army what the general practitioner is to the civil community—the hub of the medical service. As many of you know, I have recently published a small brochure on this subject, for in my opinion the regimental medical officer can do a great deal to promote the welfare of the troops of his unit. The war of 1914 to 1918 showed this clearly, and if, as appears not unlikely, Australian soldiers again see service overseas, the regimental medical officer will once more have an unparalleled opportunity of putting into practice in the field the principles of preventive medicine which he knows so well. The fact that it is easier to keep men fit than to cure them when they are sick is well known to you all. These sentiments unfortunately were not in evidence in war until after the South African campaign, when the Japanese were the first to realize and carry them out; and more recently, in Italy's war with Abyssinia, the sanitary care of the troops on the Italian side achieved notable results in keeping them free from disease. From the military point of view, the preservation of man power, it was an

outstanding achievement of that campaign. Many of you, particularly of the younger generation of graduates, will doubtless become regimental medical officers, and it is mainly with their duties that I wish to deal. At the outset it must be recognized that wherever the path of duty leads, be it to a field unit, to a position on the lines of communciation, or to a position at the base, we shall constantly be confronted with many difficulties and vexations; but we trust that they will all be borne with fortitude and understanding—I hope with patient understanding.

It may perhaps be desirable that before being called upon to undertake the duties of a regimental medical officer one should have an opportunity of serving a term in a field ambulance. This, however, is not always practicable. The position then arises in which a medical practitioner finds himself uprooted, as it were, from his civil practice or hospital residency, implanted into the army medical corps and attached to a combatant unit. Having had little or no experience of military service, he is completely lost. It may therefore be of help to summarize briefly his responsibilities and duties and to indicate to him his relationship with the unit to which he is attached; also to indicate the method of forwarding requests and recommendations. The brochure to which I have referred, published last month through the courtesy of the British Medical Agency of Queensland, is entitled "A Guide for Regimental Medical Officers of the Australian Army Medical Corps", and deals more fully with the above points. It was intended mainly to help the medical officer in the very early days of his military life; his thorough training can come only from experience and the use of the text-books which are issued for the purpose.

The regimental medical officer remains always an officer of the Army Medical Corps; he does not become an officer of the regiment, but is attached to it only in a purely advisory capacity. As a responsible and technical adviser he is there to advise the commanding officer on every point which has to do with the preservation and maintenance of the physical fitness of all ranks in the regiment. Unless it is specially delegated to him by the commanding officer, he has no executive authority, except over certain details which comprise the regimental medical service, and over all patients under his professional care. He should therefore issue orders only to such non-commissioned officers and men as are placed under his immediate command. He is himself under the command of the commanding officer, for pay duty, rations and discipline, and is attached to regimental headquarters. In all professional, departmental and technical matters regimental medical officers are under the orders and receive instructions from the assistant director of medical services of the division, either directly or through a senior medical officer.

The commanding officer and no one else is responsible for the sanitation within the limits of his command, and it is with the commanding officer that the medical officer should deal. The medical officer is responsible for giving expert advice; the commanding officer is responsible for taking the necessary action and will incur grave responsibility if he disregards such advice without sufficient grounds. It follows from this that should the medical officer think it desirable that anything should be done, left undone or altered, he must lay the matter before the commanding officer, giving clear reasons for his wishes. This may be done either verbally or in writing. Small matters are preferably best dealt with verbally; matters of greater importance should be put in writing.

In cases in which recommendations are not acted upon and in which neglect to take action appears to the medical officer to cause serious danger to health, he is bound to write officially to the assistant director of medical services, if in a division, or to the senior medical officer of the camp, area or ship, whichever applies, bringing to his notice the recommendations made and the fact that no action has been taken; a copy of the letter must be forwarded simultaneously to the commanding officer. Responsibility in the matter now passes to a higher authority. In practice this latter course is very rarely called for, and the necessity should be really urgent before it is embarked on.

Now, besides being the responsible adviser to the commanding officer, the medical officer has in addition the duty of dealing with the sick and wounded of the regiment. Being the man on the spot, if he is to do his duty thoroughly he must be in close touch with all that goes on in the regiment; and from the regiment's point of view, if the men know that some officer is interested in their health and efficiency, the good features of sanitation will certainly not tend to deteriorate, and the bad arrangements, if present, may be remedied.

The newly appointed regimental medical officer now takes up his duty with his unit and should commence by making himself acquainted with the sanitary arrangements and how they are looked after; the source of the food and its method of preparation; the cleanliness of the kitchens; the storage and disposal of refuse. The first questions that crop up are what stores and equipment are placed at his disposal for use at the regimental aid post and what personnel is allotted to him to assist in carrying out his duties.

The stores and equipment are derived from two main sources. The medical and surgical equipment (drugs, dressings, splints, instruments *et cetera*) comes from a depot of medical stores; the ordnance equipment (tents, tables, "Primus" stoves, lamps, basins *et cetera*) comes from the ordnance stores. In addition, the army service corps is responsible for the supply of medical comforts (for example, sago, cocoa, milk, brandy, wine, biscuits, eggs, arrowroot, cornflour *et cetera*) and disinfectants (for example, chloride of lime, phenol *et cetera*). All the above are drawn by the quartermaster of the unit. It is his responsibility to indent for and hand over these stores, and this equipment for the use of the medical officer.

So that you may be acquainted with what you, as regimental medical officers, are entitled to, "Cyclostyled" sheets have been handed round.[1] These contain a list of (*a*) medical and surgical equipment on charge to units, (*b*) ordnance equipment for the use of regimental aid posts, (*c*) supplies obtainable from the army service corps and from two other sources, the Red Cross Society and the comforts fund. There are also a sheet showing the constitution of the regimental medical service and another giving a list of the books which will be found useful for regimental medical officers.

To some the quantity and variety of medical supplies may seem insufficient; but superintendents of hospitals will endorse the principle that it is neither desirable nor advisable that each individual medical officer should be given what he individually considers necessary. It must be realized that it is not the function of the regimental medical service to treat serious medical cases or to perform operations. The regimental aid post is in fact a first aid station, and its requirements in stores and equipment are fulfilled by what is issued for that purpose. On mobilization this scale is increased. Remember, too, that the watchwords of the army medical corps are "improvisation" and "adaptability". If you have not two "Primuses", light a fire; if you have only one basin, get a tin; if you have no stretchers, make one (from saplings, bark and leaves). Many individuals tend to sit down and wait for things to be brought to them, instead of "git up and gitting" for themselves. The expendable stores are replaced by indent on the nearest field ambulance or on a depot of medical stores. Camp dressing stations may sometimes have to be established by a particular unit. This is, of course, a much larger organization, and the stores and equipment are much greater and depend on the number of beds established.

The personnel of the regimental medical services numbers 42 in an infantry battalion in war time. The details of this are included in the lists handed around. At peace camps it usually consists of one lance-corporal and one private. The latter drives the cart or lorry; the former assists the medical officer in the capacity of clerk, orderly and dresser.

Let me now briefly tabulate the duties of the medical officer at a camp of continuous training and when on service but not in action.

He will inspect all personnel of the unit on the first day of the camp. Do not confuse medical inspection and medical examination. This medical inspection is simply to ascertain if the member is suffering from an infectious or contagious disease or if physical appearance indicates any defect that may have arisen since the last medical examination.

The medical officer must inspect the rations (with the orderly officer) at the hour set down. One of the first shocks will be when he is asked to inspect the meat and state whether it is good or bad, healthy or diseased. This is not easy when experience or training is lacking, and one has to remember that in protecting the health of the men one has at the same time to be fair to the contractor. Arrangements are in train here for lecture demonstrations to be given to medical officers, in order that they may gain some knowledge in this regard and so be able to deal with such a contingency. It should be remembered, however, that meat need not be bad in order to cause diarrhœa, which is most commonly produced by salmonella infection from surface contamination. The medical officer is only required to say whether the meat *et cetera* is or is not diseased, or is or is not fit for food; its quality is the business of the supply officer, who is the expert on the subject.

The medical officer must see the sick each morning at the hour arranged. The sick should be marched to the hospital tent by a non-commissioned officer, detailed for the purpose, who should bring with him sick reports made out in duplicate by officers of squadrons, batteries or companies. These the medical officer should complete by writing the name of the disease (if possible in accordance with the "nomenclature of diseases"), the disposal of the patient (for example, "duty", "treatment and duty", "no duty" or "hospital"), and the sick report, when completed, must be signed by the medical officer with his full signature. One copy of Australian Army Form A46 (the sick report) should be retained by the medical officer for reference, and the other should be taken by the non-commissioned officer marching the sick to the orderly room. If it is necessary to send the patient to hospital (that is, the field ambulance or camp dressing station), a third copy of form A46 should be made out and sent with him. Educate your unit early concerning times for sick parades and stick to them, except in urgent matters like accidents. Do not permit "dribbling" to the medical officer all day long and in the night.

A daily inspection of the camp and its surroundings should be made by the medical officer, accompanied by the orderly officer of the day and the pioneer non-commissioned officer of the regimental sanitary detachment; the pioneer orderly of each squadron, battery or company should also accompany him round the lines of the squadron, battery or company concerned.

The following are some of the points to which attention should be directed.

The kitchen. The disposal of refuse and slops, the construction and proper use of grease traps and soakage pits and the cleaning of cooking utensils should be inspected. The medical officer should also ascertain whether food is kept properly stored and covered from dust and flies. The use of clean muslin or dish-cloths will be of great assistance in this respect. He should inspect the supply of hot water and cleaning appliances, including the supply of clean dish-cloths, which should be sufficient. The supply to and the wearing by cooks of proper and clean overalls and the cleanliness of the tables and chopping blocks are also to be inspected.

[1] These sheets are not reproduced, owing to lack of space.—EDITOR.

The kitchens of the officers' mess, the sergeants' mess and the regimental institutes (if any) should never be omitted, particularly if they are managed by contractors. These three kitchens are usually the worst in the camp.

Conservancy arrangements. The medical officer should inspect the conservancy arrangements, to ensure that they are being properly used and supervised. The number of flies present is a good rough test; many flies usually mean bad conservancy.

Tents. Inspect the tents for general cleanliness and to see that no food is stored and no cooking pots are kept there. Arrange for the tent bottoms (if provided) to be removed every two or three days, the ground swept, and the flaps rolled up to allow the sunlight and fresh air to enter. Notice whether there are any evidences of the neighbouring ground becoming fouled. When practicable, tents should be struck at least once a week and the ground swept, sunned and aired. Remember that the cleanliness of the men and of their tents is under the supervision of the squadron, battery or company commanders, a word to whom will usually have the desired effect; it is not necessary to report to the commanding officer, unless it is found that no action is being taken by subordinate commanders.

Canteen and institutes. The canteen and institutes should be visited and inspected with regard to their cleanliness and sanitation generally.

Water supplies and drainage. The water supplies and drainage require supervision.

Horse lines. Stable litter is very apt to accumulate and to attract and breed flies; arrangements should be made for its daily removal. As it has some manurial value, farmers are often glad to cart it away for nothing; but the process requires a certain amount of supervision.

Owing to the nature of their work, the tents and surroundings of drivers are often less well kept than those of dismounted men; this should be remedied as far as possible. The medical officer must not be satisfied with the morning round when everything is prepared for inspection, but must always be pottering about and keeping a watchful eye on things.

The regimental medical officer is not usually required to be present on parades; but, unless detailed for other duties, he should always accompany his unit if field days or tactical exercises are undertaken. He should obtain a copy of the orders and make himself acquainted with the scheme of operations. He should consider carefully in his own mind what medical arrangements are called for and how he would meet the requirements. He may submit his plans to the commanding officer and get them embodied in orders, if approved. In this way he will familiarize both himself and the regiment with arrangements for the collection of wounded in battle. If casualties can be arranged, so much the better; an opportunity will then occur for the more advanced training of his stretcher bearers and orderlies. In any case, he should carefully watch the movement of the troops so as to get an idea of what would be likely to happen on service, and should practise the selection of suitable positions for his regimental aid posts. A fact to bear in mind is that operations on service would be much less rapid than in manœuvres—an important point in connexion with the selection of regimental aid posts. On return to camp the medical officer should arrange an hour for seeing any men who wish to report sick (in the same way as in the case of morning sick). One hour after the arrival in camp is usually a convenient time to select. The men's feet should be inspected and preferably bathed, under the supervision of unit subordinate commanders.

The medical officer should visit the sick detained in his hospital tent. There are other things which must engage the attention of the regimental medical officer, such as the inoculation and vaccination of all ranks, which will be greatly facilitated and expedited by carefully arranged team work. Particular attention should be paid to the care of the feet; cleanliness, well-fitting boots, thick socks and soap summarize this. The amount of work to be done calls for review; the cooking of the food and the feeding of the men must be watched.

In addition to his medical and sanitary duties there are still two other important duties which the medical officer must undertake and which will help to fill in his spare time. These are instruction to all ranks and the training of personnel.

He should arrange with the commanding officer to give lectures to all ranks from time to time on such subjects as elementary first aid, the care of the feet, the use of the first field dressing, the causes of disease in armies in the field, camp sanitation and hygiene and defence against gas. Other suitable subjects will probably suggest themselves. The motive of these lectures should be to convince all ranks that the maintenance of health is as much the affair of every individual private as it is of the medical officer; that sanitation is their business and a part of their soldiering, and that the medical officer is there to help them; that the measures necessary to preserve health in a field army are matters of tactical and strategical importance, and that military sanitation, far from being a fad, is an important factor in campaigning, as any reference to military history will show.

In addition to his medical and sanitary duties, the medical officer has certain regimental personnel to train. This consists of orderlies for the medical officer, sanitary orderlies, regimental stretcher bearers and men for water duties. To assist the medical officer in the training of this personnel the assistant director of medical services may arrange for the service of a non-commissioned officer of the Australian Army Medical Corps to be made available for instruction in stretcher exercises *et cetera*.

It may be pointed out that a unit which did not possess men trained for these duties would in action pay dearly for its neglect; in fact, it is not unreasonable to assume that a unit, by removing the few men required for non-combatant duties from the firing line, would gain more by obviating avoidable

losses than it would lose by the inclusion of these few extra men in the firing line, and that a unit without sanitary police in war time, or stretcher bearers in battle, would suffer severely for its omission to train the necessary personnel when not in action.

Men detailed for training in the above duties should parade under a non-commissioned officer, at the hour and place mentioned in the commanding officer's orders, for the necessary drill and instruction by the medical officer. If they are not present or if there are any absentees, the fact should be reported to the commanding officer. The men in the regimental band are to be trained as stretcher bearers. The medical officer must also draw up camp medical reports dealing with physique, food, cooking, sanitation *et cetera*, and containing recommendations to be forwarded within twenty-four hours of the completion of the camp.

The Regimental Medical Officer in Action.

Having become, after a few months, inured to army conditions and requirements, and having through much hard work and many trials and vicissitudes got his battalion physically ready and his regimental medical service efficiently trained, the regimental medical officer is prepared to go into action. Let me refer briefly to some of the points to which he must now give his attention.

The degree of success which the regimental medical officer may hope to attain when his unit goes into action will depend as much on his preparation for the issue as on his work during the battle. He will have done all in his power to have his battalion fighting fit and will have evacuated those who by reason of any disability are likely to break down. One of the worst mistakes is to make a sudden call on the ambulance to evacuate the regimental aid post just prior to action, when the former is perhaps itself on the move. When no action is likely it may be expedient to deal with a few cases of minor sickness in the regimental establishment; but when an action is imminent the medical lines of communication must be clear.

The medical officer will need to be acquainted with the scope of the operations intended, especially if they involve movement, whether advance or retreat. In static warfare the existing arrangements need only to be expanded. In advance or retreat new regimental aid posts have to be selected from time to time, and the problem of maintaining contact continuously is not always easy.

The next point is the selection of a suitable position for the regimental aid post. This is the responsibility of the commanding officer of the battalion, and not of the regimental medical officer, as is often assumed. Usually it is chosen mutually. Under certain conditions, however, the regimental medical officer may have to select and establish his aid post. It should be central and close to battalion headquarters; in the odd instance when this is not practicable it is a good plan to have a runner stationed with headquarters. Immediately the site is chosen its location must be notified to unit headquarters for promulgation to all ranks and also to the commanding officer of the field ambulance and the assistant director of medical services. The medical officer should know the location of brigade headquarters. Once established, the aid post should not be moved unless this is essential. If, however, a change of location is made, this fact and the new position must be notified as before, and if practicable a runner should be left at the old site to guide casualties and stretcher squads to their next immediate destination. The posting of runners also serves the purpose of resting tired stretcher bearers.

The construction of the aid post is now entered upon. It should be bullet-proof and splinter-proof and, if possible, gas-proof; separate accommodation should be arranged for decontamination and for the care of gas casualties. The commanding officer of the unit is directed to give full consideration to the construction of the regimental aid post; but frequently the medical officer is left to his own resources. The regimental aid post should not be too small, accommodation for up to 50 cases being provided if possible. Before the action the regimental stretcher bearers are placed under the command of the regimental medical officer; more than the number laid down may be required. It was usual in the Great War to have a number of reserve stretcher bearers and stretchers; a moment's consideration will show how necessary these are. Wherever there is a relay in the carry there must be spare stretchers, so that bearers may without delay return to the field with one empty stretcher per squad. The supply of stretchers has to be kept up by the ambulance cars or wagons coming forward from the advanced dressing station. Sometimes it is necessary that there should be a relay between the front line and the regimental aid post. If the ground is very heavy with mud or sand there needs to be either a relay or more bearers than usual to each stretcher. In the Somme and Passchendaele actions as many as six bearers at a time were required to carry one stretcher.

It is not always appreciated that the regimental stretcher bearers are responsible only for the clearing of the wounded to the regimental aid post and are forbidden to carry further back than this point. The responsibility of moving the casualties from the regimental aid post is that of the field ambulance, and its bearers never function in front of the regimental aid post.

The regimental medical officer should not leave his regimental aid post during an action and until all wounded have been cleared. Not only is it here that he can be always found and is of most service, but he has to remember that it takes about seven years to produce a regimental medical officer; besides, if he is killed or wounded his replacement may take some time, and in the interim the regiment is left without a medical officer.

During the battle the regimental medical officer has to decide how much he can do for the wounded who pass through his hands. This will depend on a number of circumstances. If he has a well-equipped regimental aid post and the pressure is not very great he may be able to do more than mere first aid. Many of the wounded may be so cared for that they may be able to be passed through the advance dressing station straight to the main dressing station. If the pressure is heavy he may not be able to do more than pass on the wounded, who will have reached him with a field or shell dressing already applied. He must, however, see every wounded man. The proper application of the dressing and splints, the relief of pain, the combating of shock, the control of hæmorrhage and rapid evacuation are his constant responsibility. A cigarette, a hot drink and a quarter of a grain of morphine may save a life. Men who have been given morphine or have had a tourniquet applied must be marked "M" or "T" on the forehead in indelible pencil. A field medical card is filled in, firmly fixed to the patient's clothing, and he is on his way.

Conclusion.

By doing his duty in the way in which I have tried to explain the regimental medical officer of our Second Australian Imperial Force will prove a worthy successor to those of our profession who in the last war and in others of earlier days fought against trauma, disease and death. The army surgeon has a glorious heritage and a tradition of which any branch of the fighting forces might be proud. He is the successor of Ambroise Paré, described by Garrison as the greatest of army surgeons, who became attached to the army in 1537 and who revolutionized the treatment of gunshot wounds. He follows in the footsteps of such men as Dominique-Jean Larrey, said by Napoleon to be "the most virtuous man I have ever known", who took part in sixty battles and four hundred engagements. Many other names, some of our own day and generation, might be added to this list; but I must forbear lest I weary you. I must, however, quote Shakespeare's lines, which were used by Osler as a preface to an address "The Army Surgeon", delivered at Washington in 1894.

> Nor Mars his sword nor war's quick fire shall burn
> The living record of your memory.
> Gainst death and all-oblivious enmity
> Shall you pace forth; your praise shall still find room
> Even in the eyes of all posterity.

Whether it is to be our lot to serve abroad or to remain at home, we would all that posterity looked on us with favour. This boon shall be ours if we walk worthy of our calling in the trying days that lie ahead. And I leave you with the fervent hope that before another annual meeting of our Branch comes round we may be at peace with honour.

SHORT-WAVE THERAPY.[1]

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IN this short lecture I shall briefly describe the development and use of short-wave therapy.

This is one of the most recent and promising developments in electrotherapeutics; but I should like at the outset to utter a word of warning against extravagant claims. Such claims have in the past damaged other physiotherapeutic measures; and I would plead for an attempt to keep a balanced mind on what I regard as the most potent electrotherapeutic measure which we possess to day.

The term "short-wave therapy" means the application to the body of high frequency currents of a greater frequency than those of diathermy.

In diathermy currents of a frequency in the neighbourhood of 1,000,000 per second are used; in short-wave therapy we use frequencies from 10,000,000 to 100,000,000 per second. This means that in short-wave therapy a wave-length from 30 to 3 metres is used, whereas in diathermy the wave-length is 300 metres.

It is common to divide the short-wave range into short (30 to 10 metres) and ultra-short (below 10 metres); and the reason for this arbitrary distinction will be made clear later.

The history of short-wave therapy is, of course, largely the history of high frequency; it therefore dates from 1892, when d'Arsonval demonstrated that currents which alternated with a greater rapidity than 10,000 a second ceased to have any stimulating action on the body, the only effect being that of heat production.

It was Nagelschmidt, in 1907, who first gave the name "diathermy" ("heating through") to the employment of such currents for the purpose of heat production in the body; diathermy was then hailed as an amazing discovery, which enabled parts of the body to be heated. All previous methods of applying heat had failed, in that they had little penetration through the insulating layer of fat beneath the skin.

Since the heating produced by diathermy follows Joules's law ($J = C^2RT$, where J is the heat developed, C the current, R the resistance, and T the time), it follows that the defect of diathermy lay in the fact that most heat was produced in the highly resistant skin and subjacent fat. Further, such deep heating as was produced was most pronounced in the less resistant tissues,, since the current, having passed through the skin, obeyed the law of shunts and spread itself mainly along the less resistant paths; and the heating was proportional to the square of the current, but only directly proportional to the resistance.

Attempts were next made to use higher frequencies, in the region of 10,000,000, notably by

[1] A lecture delivered at the Australian Massage Congress in Melbourne in May, 1939.

French experimenters; but these currents were applied in the same manner as conventional diathermy, and little advance was made.

The next big development was reached in 1925, with the simultaneous attempts of Schereweschky, in America, and Schliephake, in Germany, to use short wireless waves in the treatment of animals.

At first the animal was simply placed near the antenna of a suitable generator; but this method was soon discarded in favour of the condenser field application.

In 1929 Schliephake, using more powerful apparatus, first applied this to the human body; he treated his own nasal furuncle in this manner. This has now become the classical treatment.

By the condenser field method the patient is placed between two plates, insulated from the patient, connected with the generator.

It may be asked, why should this greater frequency of oscillation be employed? What is the difference between this and diathermy?

The difference between the action of diathermy and short-wave therapy on the body depends on the fact that capacity resistance diminishes with increase of the frequency. In other words, the more rapidly a current is alternating, the more readily will it pass through a condenser.

The frequency employed in diathermy is such that most of the current passes directly through the body as a conduction current.

With the higher frequency of short-wave therapy it is easier for the current to pass through a condenser, and if we place the patient between two insulated plates connected to our generator, then the current readily passes through the body as a capacity current. By insulating the electrodes we prevent any direct conduction current passing and confine ourselves to this capacity current.

Whereas in diathermy the conduction current produces heating in accordance with Joules's law, in short-wave therapy we have a capacity current, which has different effects altogether.

Holzer[1] has shown that the heating effect of a capacity current may be expressed by the following formula:

$$N = \frac{P}{1 + \frac{P^2}{\lambda^2} \cdot \frac{1}{5630}}$$

where N equals output in watts, P equals specific resistance and λ equals wave-length.

The importance of this difference in practice can best be shown by the accompanying graph (Figure I), which indicates the relative heating achieved in different tissues by the use of different wave-lengths.

In this it can be seen that with all wave-lengths down to 30 metres the heating depends on the resistance of the tissues. With wave-lengths of 10 metres and less, on the other hand, the heating is fairly uniform in all tissues, with slight variations according to the wave-length employed. The range 10 to 30 metres lies midway between these two.

It is apparent that the great advantage of short-wave therapy lies in the more even heating produced in various tissues; this is most pronounced in the range below 10 metres wave-length. It is therefore possible to produce considerable heating of deeply situated parts, which with diathermy could be heated very little before the skin was so hot as to reach the toleration point.

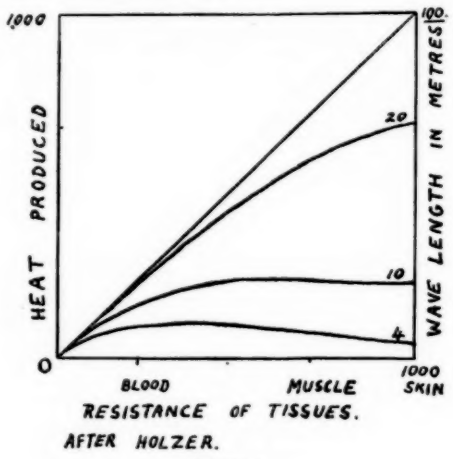

FIGURE I.

There is one other effect of these ultra-high frequencies, apart from heat, and that is the so-called specific effect of short-wave therapy. Schliephake has steadfastly maintained this theory, and it is supported by Weissenberg in his "low intensity" treatment. Weissenberg states that results have been obtained by the use of so small a power that no measurable heat is produced. Liebesny corroborates this statement.

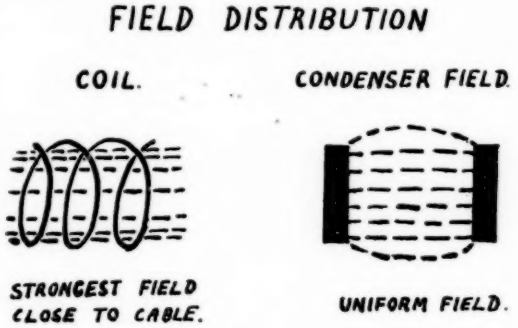

FIGURE II.

The nature of this specific effect and even its existence are in dispute. The earlier claims of a specific biological action of various wave-lengths on different microorganisms have, of course, been largely abandoned.

Nevertheless I believe that heat in the ordinary sense is insufficient to account for all the results obtained, and at present I subscribe to the view that there is something else apart from heat.

There is another method of applying short-wave therapy apart from the condenser field method, and this is the coil or inductothermy method. I wish to draw particular attention to this method and to the fact that it operates on a different principle from that of the condenser field.

Kowarschik was one of the earlier pioneers in the coil method, and with Patzold he has pointed out that when the coil operates with wave-lengths below 10 metres the effect is really that of a modified condenser field method, with capacities existing between the coils and the body.

The true application of the coil method should be confined to its use with the short waves above 10 metres in wave-length, and not to its use with the ultra-short ranges. In the coil method a cable is wound as a solenoid round the body, and the current is passed through the cable. The heating produced depends on the electro-magnetic field set up by the coil, and the heating depends upon the conductivity of the part and upon the field strength. Better conducting tissues, such as blood, are heated more than bone, for example.

The value of this, except in special cases, such as fever therapy, is doubtful.

Until we can with ease and certainty produce heating at will in any one tissue, the most generally useful method will surely be one which heats all tissues evenly.

The advocates of the coil method have claimed that it is a more penetrating form of heat than the condenser field method, and they have had some basis for their claims in the experimental work which has been carried out, mainly in America.

If we look at the problem from the physicist's point of view, it is extremely difficult to understand how this can be. We have seen that the heating of the body placed within the coil depends on the conductivity and on the field strength. The field strength is greatest near the cable and rapidly diminishes as we leave the cable, until in the very centre of the coil the field strength is relatively weak. This can readily be tested by anybody using a neon glow tube; it will be found that whereas in a condenser field the field strength is fairly uniform all the way between the plates, in the coil it is rapidly lessened as one leaves the cable. It follows that the field strength and therefore the heating will be far greater on the surface of the body placed within the coil than it will be in the interior. Correspondingly, it follows that the use of the "pancake coil" cannot possibly produce the deep heating of the condenser field, since here also the heating will be less as one leaves the coil.

Concerning the more superficial action of the coil, these views have been held for some time by Schliephake and others, and both Schall and Morris in their recent books have agreed with them.

Short-wave therapy may be applied with the condenser field by means of air-gap electrodes or rubber pliable electrodes, or by the coil method.

The air-gap method is the most penetrating, but requires a wave-length of below 10 metres before it can be operated; whereas the moulded rubber electrode can be used with a machine operating at any wave-length.

The coil method is not so penetrating and does not permit so accurate a localization of the effective field; but despite these disadvantages it is the method *par excellence* for short-wave application in therapeutic fever work. It is also very convenient for treating an extremity and the more superficial conditions, such as fibrositis and neuritis; but when deep penetration is required, then the condenser field method, with a low wave-length, under 10 metres, and preferably an air-gap electrode, should be used.

Nevertheless I cannot too strongly urge that the physiotherapist should, if possible, have both coil and condenser field methods available.

Should he be unable to have both, he should certainly not discard the condenser field method, as of the two it is the more useful.

The actual treatment is not so simple as it appears, the great difficulty being the question of dosage. At present there is no satisfactory dosimeter, and the meter placed on machines cannot be taken as the sole guide to dosage; it is of value for comparative purposes only. The dose is judged mainly by the patient's skin sensation; it is therefore of paramount importance that this should be tested first and known to be normal. It is usual to use sufficient current to produce the sensation of comfortable warmth.

Unless the operator is very skilled, the dose should never be pushed to the point at which it is as hot as the patient can bear, as is often done with diathermy. If this is done with short wave therapy serious burns can occur. The usual treatment time is ten to twenty minutes; but the whole question of dosage is impossible to deal with academically. It is largely a question of the experience of the operator, and the results of short-wave therapy depend largely on this.

There is one important precaution which must be observed. All metal objects must be removed from the treatment field, otherwise concentration of energy on these may cause burns. Sweat burns are best avoided by the air-gap technique and by attention to the condition of the skin, the accumulation of moisture being avoided.

The electrodes chosen are of such a size and so placed as to direct the energy through the part to be treated. In general, the greater the skin-electrode distance, the more penetration; therefore, in superficial conditions the electrodes may be placed close to the skin; in deep-seated lesions they must be placed well away. Further, a considerable thickness of towelling should always be placed beneath rubber electrodes, otherwise the heating of the rubber electrode is transmitted to the skin, and this limits the dosage.

Concentration of the energy to one side may always be effected by the use of a smaller electrode on that side, placed near the skin. Care should be taken to avoid too great a concentration of energy

at one point, as can occur over a projecting part of the body, such as the nose.

The indications for short-wave treatment are largely those in which penetrating heat is required, and thus are similar to those for diathermy. They are as follows.

Traumatic conditions, such as sprains and thickenings after immobilization, may be treated by short-wave therapy. In these cases it is often possible to give movement while the limb is in the short-wave field.

Rheumatic conditions can be treated in this way. Fibrositis is a common indication, and there are few cures so dramatic as those in some cases of acute lumbago. In this condition it is common for two or three treatments to drive the pain away, and relief is often obtained during the first treatment. Arthritis, especially infective arthritis, and spondylitis are conditions in which swelling can be reduced, pain lessened and movement increased.

Sciatica, particularly the type secondary to gluteal fibrositis, is often cured when all other measures are of no avail.

Short-wave therapy may be used in pelvic infections.

Neuritis and neuralgia are, in my opinion, often aggravated by short-wave therapy, and mild doses must always be used.

Circulatory disturbances, such as chilblains, intermittent claudication and incipient gangrene, are strong indications for short-wave therapy.

Facial paralysis (Bell's) responds very well to short-wave therapy.

Unresolved pneumonia may be treated by short-wave therapy.

There are certain indications which are peculiar to short-wave therapy.

1. Acute infections, such as whitlows, boils, carbuncles *et cetera*, may be greatly reduced, and Schliephake has had success even with pulmonary abscesses. In all such cases particular care must be taken if pus is present without free drainage.

2. In sinusitis, acute and chronic, short-wave therapy has already proved a boon and a very satisfactory alternative to operation. Acute cases are usually rapidly cleared up, and even in chronic cases surgical procedures are often avoided.

3. Bronchitis and asthma are often relieved. There have been a few startling successes in long-standing cases of asthma, together with a good many failures.

Contraindications are practically non-existent, except for hæmorrhage.

Short-wave therapy given by means of the coil is of considerable value in the induction of artificial hyperpyrexia.

In conclusion, may I point out that this form of therapy is only in its infancy, and that at the present time dosage is the main difficulty. There is no easy guide to dosage; it varies from case to case, and is a matter for the individual judgement of the physiotherapist. There are few forms of treatment in which the results depend so much upon the personal experience of the operator. Many of the failures recorded are due to improper selection of cases or to incorrect technique. The more experienced the operator, the fewer of these there will be.

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ACHOLURIC JAUNDICE, WITH THE REPORT OF A CASE.

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HÆMOLYTIC ANÆMIA is encountered in many conditions with varying degrees of severity, and it may occur at any age. As a secondary phenomenon it occasionally develops from infection with micro-organisms, from bacterial toxins or from other poisons, such as lead and arsenic. There is a group of hæmolytic anæmias which has been thought to be due to congenital anomalies in the hæmatopoietic system. The most important examples of this group are acholuric jaundice, sickle cell anæmia and *icterus gravis neonatorum*.

It is proposed here to discuss idiopathic anæmia associated with acholuric jaundice. Acholuria means cholæmia with absence of bile pigment in the urine. In hæmolytic anæmia the excess bilirubin in the blood stream causes an indirect reaction to the Van den Bergh test. The renal threshold for bile pigment to which a direct Van den Bergh reaction is obtained is much lower than that to which an indirect reaction occurs. Thus bilirubin appears in the urine in obstructive jaundice when the concentration in the blood is about in the ratio of one in fifty thousand, whereas in hæmolytic jaundice the concentration goes to one in twelve thousand or higher before bilirubinuria occurs. Indeed, Van den Bergh, quoted by Boyd,[1] is of the opinion that the bilirubin of a pure hæmolytic anæmia never appears in the urine.

Classification.

Acholuric jaundice occurs in two forms, the familial and the acquired. The first, acholuric family jaundice, originally described by Minkowski and Chauffard, is a fairly well-defined entity, in the following respects: it is familial, it usually occurs in the first or second decade, it is benign, it is associated with splenomegaly in most cases, the anæmia is moderate in degree, microcytosis and spherocytosis are present and the fragility of the red cells is considerably increased, and splenectomy usually results in prompt, complete and permanent cure of the anæmia. Also, increased fragility of red cells is frequently found in blood relatives of the patients.

The second form, as defined by Hayem and Widal, consists of a vague group of severe anæmias associated with jaundice. They have the following characteristics: greater severity, more acute and longer relapses, an onset in later life (usually after the age of thirty years), a greater degree of red cell resistance to hypotonic saline solution, absence of hereditary or familial trait, a variable degree of spherocytosis, a variable mean diameter and volume of red cells, the frequent presence of nucleated red cells in the peripheral blood, a higher reticulocytosis, a variable response to splenectomy, and often a fatal termination.

Many hæmatologists consider that this latter type is not acquired and that in reality it is of congenital origin, its clinical manifestations being merely delayed. This view was first expounded by Dawson[2] and Vaughan.[3] It is largely based on the increased red cell fragility which has been found in a number of cases—for instance, in those of Israels and Wilkinson[8] and of Dyke and Young.[4] Latterly a number of cases have been recorded under the headings of "macrocytic hæmolytic anæmia" and "hæmolytic (spherocytic) jaundice in the adult", which, in the authors' opinion, bear no relationship to familial hæmolytic anæmia and constitute a distinct clinical and hæmatological entity. Dyke and Young,[4] discussing the increased red cell fragility in macrocytic hæmolytic anæmia and in the Chauffard type, make the following statement:

> Actually, however, this is the only striking resemblance between them and their points of dissimilarity are far more numerous.

But even this feature of increased fragility is not constant, as Kremer and Mason[5] have shown in their report of three cases; in this they draw attention to lessened or absent abnormal fragility. Also, in Case VI of Davidson's[6] series the fragility was normal. Thompson[7] has recorded fifteen cases of subacute or chronic acholuric jaundice, with anæmia, evidence of regeneration and splenomegaly, in which examination of the blood failed to reveal spherical microcytes with their attendant fragility. It is evident, then, that cases of acholuric jaundice occur which have not any of the constant features characteristic of the familial form, apart from anæmia, an increased blood bilirubin content and reticulocytosis, and that the differentiation of an acquired type is justifiable and useful.

Ætiology.

The actual nature of the hæmolytic process is obscure. The importance of spherocytosis in this connexion has been fully recognized. Vallery-Radot indicated the relation of variation in red cell diameter to resistance to hypotonic saline solution, and his table is of interest (Table I).

The normal cell is a biconcave disk. When it is placed in hypotonic saline solution or water the osmotic intracorpuscular tension brings about absorption of water with increase of cell volume. Before lysis takes place the first change in shape noted is a flattening out and, later, bulging of the sides of the disk. In this way the cell thickness increases, but at the same time the transverse diameter diminishes. The corpuscle becomes more rounded, and in a wet film appears small and spherical. Naegeli first noted and described cells of this order in the blood in acholuric jaundice, and he suggested the connexion between them and increased fragility and hæmolysis. Haden[9] later concluded that the spherocytosis was directly responsible for the increased fragility in hypotonic saline solution, that it indicated a bone marrow defect and was pathognomonic of the disease. He stated that "the shape of the red cell indirectly represents an anatomic variation from normal". The conception is that circulating cells, which resemble in shape those about to undergo lysis in hypotonic saline solution, are much less resistant to a hæmolytic agent than are normal cells.

TABLE I.

Relation of Variation in Red Cell Diameter to Resistance to Hypotonic Saline Solution. (After *Vallery-Radot.*)

Source of Blood.	Diameter of Red Cell in Microns.	Hæmolysis Begins.[1]
Man	7·6	0·42%
Guinea-pig	7·5	0·44%
Monkey	7·2	0·44%
Dog	6·6	0·50%
Rabbit	6·3	0·52%
Horse	6·2	0·54%
Rat	6·0	0·54%
Cat	5·6	0·60%
Goat	5·3	0·72%

[1] Strength of sodium chloride solution.

It is to be understood that not all the erythrocytes in acholuric jaundice are spherocytes. Thompson[7] gives the figure as 10% to 25% of cells in the blood. The remainder are normal red cells and reticulocytes, the latter frequently constituting as many as 40% or 50% of the total red blood cells. It seems that it is the older cells which become spherical and are selectively hæmolysed. The reticulocytes are younger and are said to be more resistant, so that a high reticulocyte count may diminish the fragility. One worker states that he has never seen reticulation in spherical cells.

The estimations of mean cell volume, mean cell thickness and mean cell diameter are of little value in demonstrating the presence of spherocytosis in this disease. Spherocytosis is not common to all cells at a given time, and the anæmias may be macrocytic or microcytic.

As mentioned above, Haden[9] concluded that spherocytosis, which renders cells prone to hæmolysis, was an essential feature of the disease due to bone marrow defect; but Kremer and Mason[5] showed that there was active hæmolysis of transfused normal cells. They made the following statement:

> We found . . . that after a large quantity of blood (6,320 cubic centimetres) had been transfused there was a considerable discrepancy between the calculated theoretical and actual hæmoglobin level at the end of drip transfusion—a difference of 25%—accompanied by an increase in the bilirubin content of the blood. That this was not due to alteration in total blood volume is shown by the difference not occurring in large numbers of transfusions in patients with other diseases.

In line with these findings is the recent work of Dameshek and Schwartz.[10] Their main thesis is that the hæmolytic conditions are due to the action of hæmolysins, possibly of different types and present in different amounts and modified by the individual's power to react. Their work was based on the finding, in three cases of hæmolytic anæmia, of iso-hæmolysins of the immune-body type. They prepared hæmolysins to guinea-pig red cells by the injection of guinea-pig red cells into rabbits. By injecting this hæmolytic serum into guinea-pigs in varying doses they produced acute and subacute hæmolytic anæmias characterized by microspherocytosis, a pronounced fall in erythrocyte and hæmoglobin values, and in some rabbbits which received greater quantities of serum, hæmoglobinuria. The intensity of the changes varied with the number and potency of the injections. Various experimental conditions were produced, which could readily be matched with well-known clinical conditions.

This work indicates that, at least in some cases, the genesis of the dyscrasia is in the blood, and that the erythropoietic tissues, the spleen and the red cells themselves are not at fault.

Treatment.

In familial acholuric jaundice treatment by splenectomy produces remarkably good results. The condition of increased fragility may persist; but the patient no longer suffers from the symptoms of the disease.

In the acquired form, with its severe crises, blood transfusion is the sheet anchor, and it should be used when the hæmoglobin percentage falls to less than 35. This measure is not without danger, as severe reactions may occur, although these appear to be uncommon. Most authors recommend small "pilot" transfusions at first. Israels and Wilkinson's four patients showed no untoward reactions, in spite of the fact that this precaution was not taken. Hæmatinics are of no value.

Splenectomy is a valuable form of treatment. It is to be regarded as a procedure which will modify the disease rather than cure it. The spleen, with its reticular spaces and sinuses, is a red cell reservoir, which is capable of retaining one-quarter of the total red cells of the body. In this circulatory backwater is to be found a considerable proportion of the reticulo-endothelial system. It is apparent that if this organ is extirpated the process of removal from the circulation of the red cells, damaged by hæmolysins, will be inhibited. That splenectomy does not remove the cause of the condition is shown by the anæmia, the reticulocytosis and the bilirubinæmia, which in the majority of cases persist. Brilliant results are achieved in some cases, the blood picture becoming normal; but this has also occurred when splenectomy has not been performed. A technical point in the operation is that the splenic artery should be ligated first and that adrenaline should be injected hypodermically before the veins are tied, in order to ensure that the organ is emptied of blood as far as possible. It is advisable to restore the red cells to a normal level by continuous drip transfusion. Most patients withstand operation well, but some die of post-operative complications, such as infection or pneumonia.

Splenectomy favourably modifies the disease in most cases, but the subsequent history is often marked by relapses and remissions. However, as these patients may succumb to progressive red cell destruction, operation, although a drastic measure, must be considered, as there is a limit to transfusion therapy. The latter will tide a patient over a crisis; but it does not give the same satisfactory result as in Lederer's anæmia, in which it seems to interrupt a vicious circle and bring the hæmolytic process to an end.

Report of a Case.

D.McL., a male, aged forty-three years, was admitted to the Royal North Shore Hospital of Sydney on February 13, 1939. For three weeks prior to his admission he had had breathlessness on exertion, severe enough to prevent him from working. He had suffered from general weakness and debility and had had some swelling of the ankles. There was no previous history of anæmia or jaundice, and no family history of anæmia could be defined. On examination he was seen to be jaundiced, the skin being of a light golden colour. There was no purpura. The liver, spleen and lymph glands were impalpable. There was a faint systolic apical cardiac murmur. The temperature was raised to more than 101° F. Bile was absent from the urine. There were no other significant physical signs. Fragility tests performed on the patient's available blood relatives revealed no abnormality.

Laboratory investigation revealed a grave anæmia, increased blood bilirubin content, pronounced reticulocytosis, the presence of spherocytes, increased red cell fragility, the presence of nucleated red cells and considerable anisocytosis and poikilocytosis. Urobilin was present in the urine. The plasma bilirubin value was two milligrammes per hundred cubic centimetres of blood. The urine contained 0·02 milligramme of lead per litre. The bleeding time and blood coagulation time and the thrombocyte count were normal. The mean corpuscular volume was 106 cubic μ, the mean corpuscular hæmoglobin content was 30$\gamma\gamma$, and the mean hæmoglobin concentration was 28% (see the chart, Table II).

On February 14, 1939, a blood transfusion of 600 cubic centimetres was given, and this somewhat restored the patient's blood count. Within six days, however, his condition had relapsed and had become so grave that splenectomy was decided upon. The spleen, which had now become palpable, was removed by Dr. R. A. Money on February 23, 1939, and the operation was immediately followed by a massive transfusion of 2,100 cubic centimetres of blood, given during the next thirteen hours. This restored the patient's blood count considerably. His immediate post-operative course was marked by the onset of cough and pain in the chest on the day after operation. Examination of the sputum revealed pneumococci in pure culture, and X ray examination indicated a blotchy dulness towards the bases of both lungs. With the exhibition of "M & B 693" (17 grammes in all) the pulmonary condition resolved, and six days later the chest was clinically and radiologically clear. The thrombocytes, which numbered 437,000 per cubic millimetre on his admission to hospital, increased to 1,600,000 sixteen days after splenectomy. After the operation the anæmia gradually decreased, the jaundice abated and the reticulocytes diminished in number. The presence of spherocytosis was still noted; this indicated that a hæmolytic tendency remained.

On August 23, 1939, six months after operation, the patient said that he felt remarkably well and that he was performing light work. An examination of the blood revealed 4,400,000 red cells per cubic millimetre and a

TABLE II.

Date.	Red Cells per Cubic Millimetre.	Hæmoglobin Value.	Leucocytes per Cubic Millimetre.	Spherocytes.	Nucleated Red Cells per 200 Leucocytes.	Reticulocytes.	Hæmolysis.[1]	Treatment.
13/2/39	1,000,000	26%	11,000	—	60	—	—	Iron.
14/2/39	1,300,000	28%	—	Many.	—	62%	0·75%–0·3%	Transfusion, 600 cubic centimetres.
16/2/39	1,900,000	36%	9,300	Very many.	A few only.	—	—	——
18/2/39	—	29%	—	—	A few	47%	—	——
20/2/39	900,000	23%	—	—	143	—	—	Transfusion, 600 cubic centimetres.
21/2/39	1,350,000	28%	16,500	—	200	28%	—	——
22/2/39	1,400,000	28%	14,000	Present.	210	35%	—	——
24/2/39	3,000,000	53%	11,000	Fairly numerous.	170	22%	—	23/2/39, Splenectomy.
25/2/39	3,500,000	60%	11,300	Not numerous.	24	14%		Transfusion, 2,100 cubic centimetre.
26/2/39	—	58%	—	—	6	—	—	"Anahæmin", one cubic centimetre.
27/2/39	3,200,000	50%	14,100	—	7	4%	0·65%–0·3%	——
28/2/39	3,000,000	53%	12,800	Fairly numerous.	8	3·5%	—	——
1/3/39	3,100,000	53%	11,700	Plentiful.	11	3·5%	—	——
2/3/39	3,200,000	55%	11,800	—	12	—	—	——
4/3/39	3,500,000	56%	14,900	—	5	—	—	——
6/3/39	3,600,000	56%	12,800	—	3	3%	—	——
9/3/39	3,300,000	58%	—	Numerous.	None.	—	0·55%–0·3%	——
11/3/39	3,200,000	56%	—	—	—	—	—	——
15/3/39	3,200,000	59%	9,800	—	—	2·5%	—	——
24/3/39	3,700,000	66%	9,600	Present.	—	—	—	——
31/3/39	4,100,000	71%	9,200	—	—	—	—	——
13/4/39	4,300,000	70%	9,300	—	—	—	—	——
26/4/39	5,100,000	79%	12,000	Present.	5	—	—	——
17/5/39	3,800,000	61%	10,600	—	112	—	—	——
1/6/39	3,200,000	57%	12,500	Many.	—	9·2%	—	——
15/6/39	3,000,000	56%	7,800	—	—	14%	0·6%–0·3%	——
26/7/39	3,400,000	64%	9,700	Plentiful.	—	—	—	——
23/8/39	4,400,000	65%	—	—	11	—	—	——

[1] Strength of sodium chloride solution at which hæmolysis begins and is complete.

hæmoglobin value of 65%. Anisocytosis, poikilocytosis, basophilia and spherocytosis were still present, and normoblasts, 11 for every 200 leucocytes, had reappeared.

On November 22, 1939, the red cells numbered 4,400,000 per cubic millimetre, the hæmoglobin value was 76%; many spherocytes were present, and polychromasia and basophilia were noted. Four normoblasts were found for every 200 leucocytes. The leucocytes numbered 11,600 per cubic millimetre.

Summary.

The classification, ætiology and treatment of acholuric jaundice are discussed, and reference is made to the differentiation of the familial and acquired forms.

A case of acquired hæmolytic jaundice is reported, in which treatment was by splenectomy and in which the patient has been kept under observation for a period of six months. It is shown that, while treatment by splenectomy was of great value, spherocytosis, reticulocytosis, nucleated red cells in the blood and increased fragility of red cells are still present, so that the hæmolytic process persists.

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(10) W. Dameshek and S. O. Schwartz: "Hemolysins as Cause of Clinical and Experimental Hemolytic Anæmias, with Particular Reference to Nature of Spherocytosis and Increased Fragility", *The American Journal of the Medical Sciences*, Volume CXCVI, December, 1938, page 769.

Reviews.

DISEASES OF INFANCY.

For fifty years the medical profession has been familiar with books on the practice of medicine confined to children. Now books on medicine restricted to the period of infancy are beginning to appear. Such a book is "Clinical Pædiatrics (the Baby)", edited by W. R. F. Collis, with contributions from the editor and other well-known pædiatrists in Dublin.[1]

The book is well written and there are numerous excellent illustrations. It is thoroughly up to date. The chapter on the neonatal period is very good; physicians on the staffs of hospitals where additions or alterations to the children's wards are contemplated should certainly peruse it.

There is little in the book with which we disagree. On page 23 it states: "If it [the prepuce] cannot be drawn back over the glans, perform circumcision before the third or fourth week." Gentle stretching of the prepuce and freeing of adhesions should be sufficient in the majority of cases. Further on he writes: "The mouth should be cleansed out two or three times a day." There is no need for daily attention to the mouth before the teeth arrive. There is a risk of abrasion of the mucosa and of assisting in the lodgement of such infections as thrush. On page 63 the writer states that in dealing with thrush the mouth should be cleansed out "with glycerine and borax"—glycerine a hygroscopic substance and borax a slow poison!

Nevertheless the book is a valuable one, especially to the student and medical practitioner commencing practice.

Whether there is any advantage to be gained by a restriction of the field of this book to diseases of infancy is debatable. With the inclusion of very little more, such as a chapter on rheumatism, the book could be made applicable to the whole of childhood. On the other hand, in books devoted to the whole of childhood there would not be the detailed account of the general and medicinal treatment of diseases of infancy, for such books generally describe the treatment suitable for the older child.

A HISTORY OF TROPICAL MEDICINE.

In compiling "A History of Tropical Medicine" H. Harold Scott has had to decide the question of the scope of his work, not only in regard to the diseases to be discussed, but also in regard to the amount of clinical and epidemiological matter to be included in the discussion.[2] The selection of subjects has been well made, and in dealing with those diseases which overlap, or which used formerly to overlap, from the tropical zones into temperate climates, the author has quite justifiably included the essential details of their non-tropical history. Certain of the less widely distributed and less important tropical diseases have been disregarded; but the omission of any but a passing reference to the typhus-like fevers is unfortunate, in view of their growing importance and the considerable confusion which exists about them at the present time.

The chapters on the activities of the navy, mercantile marine and army in the tropics during the last two centuries, and on the slave trade, have been well conceived. From them one learns of the almost incredible mortality rates which prevailed, and of the insanitary living conditions which contributed to them. Well demonstrated also is the pig-headedness of laymen, especially of those in charge of undertakings, in disregarding the advice of medical workers who were trying to ameliorate conditions. That often their observations were unscientific, their conclusions erroneous, and their views dogmatic, does not detract from the credit due to these early workers, who from time to time achieved excellent results in the face of heavy opposition from those they sought to help.

In the chapters on the individual tropical diseases clinical matter and epidemiological considerations have been included, often in much detail; but this has been necessary in order to correlate and make understandable the various historical aspects of these diseases. This makes the book a very useful one for general reference. There is abundant evidence of extensive historical research, and in addition to a good bibliography there are many smaller papers and records mentioned in the text.

Unfortunately there is much repetition. The plan of subdividing each chapter into separate sections on the history of epidemiology, cause, transmission, diagnosis, treatment and prophylaxis has led to the same ground being covered two or more times in many instances. The general style is verbose; too often simple statements must be unearthed from among masses of unnecessary qualifying phrases. There is evidence that too little care was used—certain gross grammatical errors and irritating discrepancies give the impression that the copy was thrown to the printer wet from the pen, and many of the typographical errors could surely not have survived even moderately careful proof-reading. The biographies of great men in the field of tropical medicine are well worth their place, and in the process of condensation have acquired a comparative crispness that is most welcome. We hope that the industry of the author and the real interest of his subject matter will be rewarded with an opportunity for early revision and checking.

MEDICAL ELECTRICITY.

"Essentials of Medical Electricity", by Cumberbatch, has appeared in its eighth edition.[1] This has become necessary owing to the rapid growth in popularity of the use of "shortwave" and "inductothermy" machines, which are largely replacing diathermy. The reason is not hard to understand. With diathermy the actual treatment was accompanied by the rather tedious application of metal electrodes to the bare skin of the part. With short wave and inductothermy this is unnecessary—treatment is given often over clothing or with plates not even in contact with the patient's skin. The difference between the older longer waves and the more modern short waves and induced currents in the production of heat in the tissues is explained in new chapters; but it will probably remain a mystery to the majority of users.

In general the book follows more or less the lines of its forerunners, which is to say it gives as shortly as is compatible with understanding, descriptions of practically all electrical methods used in treatment. Some pieces of apparatus which have been discarded have been omitted from the text, as for instance the original d'Arsonval type of generator.

A very useful and most important chapter is one devoted to risk associated with the use of currents derived from the main. With electrical treatment used so commonly and the ever-present danger of electrical shock, this risk is not given sufficient thought.

The book is one to be recommended for reliable and up-to-date information in medical electricity and should be in the hands of every physiotherapist.

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[1] "Clinical Pædiatrics (the Baby)", edited by W. R. F. Collis, M.A., M.D., F.R.C.P., F.R.C.P.I., D.P.H., with a foreword by A. H. Davidson, M.D., F.R.C.P.I., F.C.O.G.; 1938. London: William Heinemann (Medical Books) Limited. Demy 8vo, pp. 471, with illustrations. Price: 21s. net.

[2] "A History of Tropical Medicine, Based on the Fitzpatrick Lectures Delivered before the Royal College of Physicians of London, 1937-1938", by H. H. Scott, C.M.G., F.R.C.P., D.P.H., D.T.M. and H., F.R.S.E.; in two volumes; 1939. London: Edward Arnold and Company. Medium 8vo, pp. 1184. Price: 50s. net.

[1] "Essentials of Medical Electricity", by E. P. Cumberbatch, M.A., B.M., D.M.R.E., F.R.C.P.; Eighth Edition, revised and enlarged; 1939. London: Henry Kimpton. Demy 8vo, pp. 542, with 15 plates and 147 illustrations. Price: 12s. net.

The Medical Journal of Australia

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All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: Initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

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BRANCH MEETINGS.

THAT the primary object of the British Medical Association has to do with the study of disease—its causation, prevention and cure—is a statement which cannot be over-emphasized. Non-medical people who read of the activities of the Association in this journal and in its parent publication, *The British Medical Journal*, may be excused if they attach too much importance to discussions on medico-political or medico-social matters. These are the subjects which they understand, at least in part, for to the lay person the technicalities of research and adventures in therapeutics cannot mean a great deal. Anyone who cares to go through the files of THE MEDICAL JOURNAL OF AUSTRALIA for the past twelve months will see that very few meetings of the Australian Branches have been devoted to matters of medical politics. On the other hand, scarcely an issue of the journal has appeared in which there has been no account of a scientific gathering of one of the six Australian Branches or of kindred medical societies in which Branch members are interested. It is the scientific side of its activities which holds the Association together; were it not so, the Branches would soon lose their usefulness and might even cease to exist. This is true in spite of the fact that some medico-political meetings are much more largely attended than are those dealing with some new syndrome or an aspect of research in its application to clinical medicine. At the beginning of a new year it may be useful to consider ways in which the scientific meetings of the Branches may be made more attractive to members and attendances at Branch meetings increased.

Branch meetings on scientific subjects may be considered from the two points of view, subjects and speakers. The drafting of programmes for the year is generally in the hands of the Branch council or a subcommittee appointed by it. On the decisions of this body the success of the year's work must primarily depend. It would be absurd to suggest that subjects could be chosen which would interest all members of a Branch, but as far as possible those selected should have a wide appeal. Many subjects will be of interest, even if not of practical importance, to general practitioners—the realm of general practice is very extensive and, as far as we can judge, the Australian general practitioner is prepared to spare no effort in mastering a new and difficult subject. When subjects with a special interest are chosen—and it is right that such subjects should sometimes be selected—they should as a rule have an approach from more than one of the special branches of medical practice. Subjects with a limited and highly specialized appeal are best considered in sectional meetings. Having chosen the subjects for discussion, the Branch council or subcommittee should find speakers, who would be invited well in advance of the date of the meeting to prepare a paper. Those who are to open discussions should also be chosen. We have always contended that the best meetings are those for which speakers have been carefully selected and for which ample time for preparation has been allowed. Papers which are offered should be perused by a committee before they are allowed to be read. In regard to speakers, it is unfortunately true that few medical practitioners have had any training in public speaking and fewer still in the delivery of lectures to men of their own standing. One of the reasons why attendance at Branch meetings is often

poor is that those who present papers sometimes stand and read them in a dull, flat and monotonous voice, which has either a soporific or an irritating effect. Papers should not be read. The speaker should talk to his paper—it can be read later on when it is published. Pictures are always useful, and charts and graphs will make many an obscure point clear and save much talk.

If Branch meetings are carefully planned in the way which has been suggested, and it is known that care and trouble are taken in the preparation of papers and in the choice of speakers, attendances should not be small. We fear that in some places a reputation for dull meetings has to be lived down, and this will take time. In these circumstances personal canvass and some organized "rounding up" will be useful. It is a poor compliment to ask a man to spend months on the preparation of a paper and then to expect him to present it before a handful of people. A final suggestion which we would make to Branch councils is that of interchange of speakers with other Branches. This could be arranged without very much trouble; it would be advantageous both by increasing the value of discussions and by the promotion of goodwill and understanding between the Branches.

Current Comment.

CONVULSIONS IN INFANCY AND CHILDHOOD.

EVERY medical practitioner of experience has witnessed the state of panic into which an ordinarily sane well-organized household can be thrown when the baby has convulsions. To the mother probably no illness is more terrifying. And she has reason for her fear. The medical attendant therefore must make it his duty to become familiar with the causes of convulsions in infancy and childhood. In addition to making a diagnosis and providing appropriate treatment, he must be able, for the sake of the mother, to give a satisfactory explanation of the symptoms and logical views concerning the prognosis. Every medical man knows how difficult this may be. Some assistance is obtainable from a perusal of a recent paper by M. G. Peterman.[1] This worker has carefully investigated 1,000 cases, in which the patients ranged in age from newly born to sixteen years. Acute infection was the cause of the convulsive seizure in 34% of cases, idiopathic epilepsy in 23·6%, cerebral birth injury "or residue" in 15·5%, a group of conditions labelled "miscellaneous" in 12·7%, and spasmophilia or tetany in 8·9%. In 5·3% the cause was not established. The causes vary in frequency in different age groups. In early infancy, as would be expected, cerebral injury accounts for the greatest number of cases. Peterman remarks:

> The greatest hazard for the newly born infant is his passage through the birth canal. With a normal delivery, from 10 to 12 per cent of all infants suffer some degree of intracranial injury. With a difficult or abnormal delivery this percentage increases to almost 100.

Cerebral birth injury was the cause of convulsions in 54 of Peterman's 79 cases among infants up to one month old. In the next age group (one to six months) acute infection was more important, being responsible for 57 of 138 cases. Cerebral birth injury still held a prominent place, occurring in 25 cases. Infantile tetany occurred in only three of the 79 cases in the earlier age group; in the later group spasmophilia or tetany occurred in 19 of the 138 cases. In the next group (six to thirty-six months) the incidence of acute infection was still higher (194 of 442 cases), spasmophilia or tetany occurred in about the same relative proportion as in the second age group, cerebral birth injury still held a prominent place (49 cases, or 11·1%), and idiopathic epilepsy, which in the two earlier age groups was a very minor cause, had now become of considerable importance (66 cases). Meningitis (14) and encephalitis (13) are classified separately from acute infection. In the next group (three to ten years) idiopathic epilepsy was by far the most important cause (110 of 251 cases, or 44%). Acute infection (61) and cerebral birth injury (22) were still prominent. Among other causes mentioned in this age group were cerebral injury other than birth injury (11), cerebral tumour (5), tetanus (4) and malaria (1). In the age group ten to sixteen years idiopathic epilepsy bulked far the largest (37 of 56 cases), the next most frequent being encephalitis (six cases). Acute infection does not appear in the list of causes in this age group.

Peterman mentions a small group of cases in which convulsions occur in association with pyrexia of unknown origin. Convulsions of this type "occur at irregular intervals for two or three years in children under 3 years of age".

Peterman remarks on the absence of hypoglycæmia from his series. He has never seen convulsions that could be ascribed to this cause. When a previous diagnosis of hypoglycæmic convulsions had been made he was unable to find "a consistent hypoglycemia before, during or after a convulsion"; convulsions could not be induced by fasting or the administration of insulin; the response to glucose tolerance tests was normal. He suggests the possibility that hypoglycæmia might precipitate convulsions in the presence of an organic lesion or epilepsy. He mentions two cases, reported by Gibbs and Lennox, in which the intravenous administration of glucose abolished *petit mal* and

[1] *The Journal of the American Medical Association*, July 15, 1939.

the administration of insulin induced it. Gibbs and Lennox stated that the "amount of petit mal activity in these cases tended to be inversely proportional to the level of the blood sugar". Peterman remarks that these observations do not agree with his experience that fasting and the ketogenic diet, which induce low blood sugars and a depletion of carbohydrate in the body, are the most effective procedures available to control petit mal epilepsy".

Strange causes have been ascribed to convulsions, as might be expected; convulsions are phenomena that are not readily understood, and they are apt to be viewed dimly through a mist of superstition; if no obvious cause is at hand any associated abnormality is apt to be fastened on. With this in mind we quote the following paragraph:

> I have previously emphasized the fact that "teething", worms and adhesions of the foreskin or clitoris are not causes of convulsions. Delayed dentition is often associated with rickets. If spasmophilia follows, convulsions may supervene. Thus the delayed dentition and the convulsions are due to the same common cause but bear no other relation to each other.

Peterman could add many more to this list of supposed causes that are not causes.

He goes on to say that the "medical profession is responsible, if not for the origin, at least for the persistence of the common misconceptions of the causes of convulsions". The medical attendant must realize that convulsions are a symptom, albeit a serious one, demanding a "thorough study of the patient and a determined effort to find the cause". In this he stresses the importance of careful history taking. For example, "a history of prematurity suggests a 75 per cent possibility of some degree of intracranial hemorrhage or injury" and a likelihood of rickets and spasmophilia.

> A prolonged difficult labor, extreme molding of the head, cyanosis and lethargy, difficulty in nursing or asphyxia pallida suggests a cerebral injury which is a potential cause of convulsions. The convulsions may occur immediately or as long as nine years later.

Peterman also mentions that a description of a fit may be of great value in diagnosis. For example: "increasing irritability, facial twitchings and then carpopedal spasm in an infant with rickets is typical of spasmophilia".

In discussing the treatment of a child with a convulsive seizure, he remarks that probably more harm has been done with hot baths and hot packs than with neglect. If fever is high, cool packs or cool sponges should be used. An enema of hypertonic saline solution should be administered. Spinal puncture should be performed if facilities are available; as the drainage is of therapeutic value whether the fluid is under pressure or not, and examination of the fluid is helpful in diagnosis. But the most effective therapeutic measure is the administration of chloroform by inhalation. The dangers of chloroform are not nearly so great as those resulting from a continuation of the convulsions. He advises the medical attendant always to bear in mind that a convulsive seizure itself produces serious cerebral injury and that the child should remain at rest in bed for a few days.

Peterman has presented his material well. His paper is concise and readable and contains valuable information. The statistical matter is of special importance. Any medical man would be repaid for time spent in studying it, whatever his special interests in medical or surgical practice.

THE FUNCTION OF THE SPLEEN.

A CASE of some interest has been reported by C. R. Das Gupta and L. Everard Napier.[1] The patient was an Indian boy, aged ten years, who suffered from microcytic hypochromic anæmia and ankylostomiasis. A feature of the blood picture was a persistently high thrombocyte count (2,180,000 or more per cubic millimetre). The administration of an anthelmintic (carbon tetrachlorethylene) and the exhibition of iron in what were regarded as adequate doses effected no great change in the anæmic condition. The thrombocyte count remained unaltered. Das Gupta and Napier concluded that "this was not a simple case of iron-deficiency anæmia, but that some other factor or factors were responsible for this anomalous combination of anæmia and thrombocytosis". They therefore administered 5·0 cubic centimetres of spleen substance intramuscularly each week for five weeks, on the assumption that, as the removal of the spleen caused an increase in the number of thrombocytes in essential thrombocytopenia, administration of splenic tissue should cause a diminution in their number in thrombocytosis. Whether as a result of this treatment or not, the thrombocyte count fell to 401,400 per cubic millimetre. The anæmic state remained unaltered until further iron salts were given. Three weeks after the termination of treatment, and about seven weeks after the final injection of splenic substance, the blood picture was still normal. As Das Gupta and Napier point out, regulation of the thrombocytes is almost certainly one of the spleen's functions; but it is not known how this function is exerted. In essential thrombocytopenia there appears to be either a hyperfunction of the spleen, causing too great a destruction of platelets, or a primary megakaryocyte deficiency (either in production or in maturation), resulting from a depressant or inhibitory action of the spleen on the bone marrow. Das Gupta and Napier regard the latter possibility as the more likely. But they point out that the relationship between the spleen and marrow is not clearly understood; for the spleen sometimes stimulates and sometimes inhibits the action of the marrow. They suggest that in their case the spleen inhibited the erythropoietic function and stimulated the megakaryopoietic function. The administration of normal splenic substance "effected an immediate correction in the thrombocyte formation and paved the way for the correction of the anæmia with iron". We admit to finding these conclusions difficult to swallow. However, the case is interesting and it suggests an avenue for the further investigation of splenic function.

[1] *The Indian Medical Gazette*, October, 1939.

Abstracts from Current Medical Literature.

RADIOLOGY.

Röntgenological Manifestations of Emphysema.

JAMES O'DONOGHUE (*American Journal of Roentgenology*, December, 1938) states that it is well known that in the normal lung, iodized oil, obeying the law of gravity, fills all the bronchioles supplied by the injected bronchus. After a short interval (five to ten minutes) the oil enters the terminal air sacs, producing in the skiagram the appearance of a branch of a tree at full bloom. Further examination several hours later reveals the major portion of the oil to be still evenly distributed throughout the alveolar structure. In those patients who have permanent distension and disorganization or destruction, the appearance is different. When first injected the bronchi appear spread out, barren and widely separated from one another. They are sometimes curved or bent, owing to pressure from neighbouring bullæ. The preterminal bronchioles often completely fail to fill. They may end abruptly or may extend in more or less irregular narrow pipe lines to isolated clusters of normal alveoli which have escaped occlusion and disorganization. The filling of the alveolar structure may require many hours or may never occur at all in the involved area. Rarely, if ever, has any of the oil been seen to enter emphysematous blebs. The lobules and alveoli are conspicuous by their absence. Further examination in these cases several hours after the instillation of the opaque medium reveals more strikingly the scantily filled alveoli with large intervening areas of alveolar disorganization or distension. In the normal individual oil remains for months in the alveolar structure. In the emphysematous patient most of the oil is expelled by coughing within an hour or so. The difference between the normal and the emphysematous lung, after the oil is coughed up, is quite striking. In the latter there is now an irregular and scattered distribution of the oil-filled alveoli with large areas of alveolar disorganization or occlusion intervening.

Disk-Like Atelectases.

ALBERT OPPENHEIMER (*Radiology*, December, 1938) describes peculiar linear shadows in the lower parts of one or both lungs occurring in various abdominal diseases. Crossing the bases more or less horizontally, these shadows extend from the cardiac border into marginal areas, commonly at the level of the dome of the diaphragm or a little higher. They are usually almost linear, clearly defined and straight, but may also form a triangular ill-defined haziness diverging from the lateral portion of the linear shadow toward the wall of the chest. But for their localization the formations resemble the shadows produced by thickened interlobar septa. They may be single or multiple, either bilaterally or at one base. In most instances the corresponding hemidiaphragm is elevated; its respiratory excursions are diminished, absent or paradoxical, according to the degree of paresis. A small pleural effusion may coexist. These changes may persist for indefinite periods, or they may subside when the clinical condition improves. The linear shadows are caused by localized areas of atelectasis. Whenever respiration becomes shallow, a small bronchus may become obstructed by mucus or muco-pus, especially in the presence of increased bronchial secretion. This obviously leads to atelectatic collapse of the corresponding part of the lung; the collapsed portion retracts; the negative pressure in the pleural cavity and the comparative rigidity of the thoracic walls counteract or resist retraction, but the surrounding normal pulmonary tissue, being very elastic, yields by allowing the alveoli to dilate; consequently, the collapsed portion retracts by stretching the normal lung above and below it, but it remains stretched between the obstructed bronchus and the pleural surface of the lung. Hence the almost linear appearance and the more or less horizontal position of the shadow that corresponds to the atelectatic region.

Vascular Tumours and Anomalies of the Skull and Brain.

CHARLES W. SCHWARTZ (*American Journal of Roentgenology*, June, 1939) states that about 80% of venous angiomata contain sufficient lime salts to cast a recognizable shadow on the X ray film. These shadows are apt to be rather characteristic or at least suggestive of the type of lesion. If the calcification is in linear streaks of a more or less convoluted form, and particularly if the streaks show a tendency to an arrangement suggestive of parallel lines, it is fairly certain that the lime is deposited in vessel walls. If the calcified vessels are seen end on, the shadows will appear as more or less true circles. Occasionally the linear shadows may be indistinct so as to suggest the possible existence of a slow growing type of glioma. The history will usually be a help in the differential diagnosis, and in addition there will be, in all probability, some other skull changes in the presence of a glioma, such as atrophy of the various parts of the *sella turcica*. The *angioma venosum* rarely gives rise to an elevation of intracranial pressure, nor is it accompanied by any increase in the size of the vascular channels seen on the inner table of the calvarium. The arterial angioma is apt to be larger and far more complicated than the venous variety. The angioma arteriole is usually accompanied by one or more enlarged arterial channels in the inner table of the calvarium, and not infrequently there will be evidence of atrophy of portions of the *sella turcica*. Hæmangiomata of the skull bones usually begin in the diploe; either they may produce bone hypertrophy, due to apparent invasion of the bone, or there may be a purely osteolytic reaction. In either case the lesion is localized and may or may not be surrounded by bone of increased density in the form of a thin ring of osseous tissue. The tumour does not have a tendency to destroy the overlying periosteum, which is almost always raised but intact. When spiculation occurs the spicules seem to radiate from a central point and do not appear perpendicular to the skull tables, as is the tendency of spicules produced by a meningioma or sarcoma. In the presence of a hæmangioma of the calvarium there will be no vessel channel leading to the lesion, or if one is seen crossing the involved area it will not be enlarged and should be approximately comparable with corresponding channels of the opposite side. In the presence of a meningioma the vessel channels in the immediate vicinity would be expected to be enlarged and increased in number.

Radiology in Pregnancy.

J. B. HARTLEY (*British Journal of Radiology*, April, 1939) states that fœtal death may be diagnosed from several observations, but the single sign most widely known and used is Spalding's sign, the overlapping and unmistakable collapse of the bones of the fœtal vault, seen in all views. It may be diagnosed when, with or without Spalding's sign, the fœtus has failed to enlarge radiologically over a period of, say, four weeks, and it may be diagnosed with absolute certainty when the fœtal parts have sagged (the rolled-into-a-ball appearance) between successive radiographic examinations at an interval of a month or even less. Spalding's sign has proved infallible provided that it is positive. Absence of Spalding's sign can occur with a dead fœtus (although the "ball sign" should still be present) if the presentation be not vertex. The important detail in the diagnosis of Spalding's sign is that all the vault bones must overlap, that is, they must have a collapsed appearance on all radiographs and in all views, it being a *sine qua non* that the patient be known to be not in labour. Spalding's sign becomes positive within a few days of the occurrence of fœtal death. On the death of a fœtus there occurs at once what one would expect—a general loss of tone; all the fœtal parts go limp, and the deformities which will occur depend on the mechanics of the weight of the fœtus at the time of death. Thus Spalding's sign is but a part of the total radiological evidence of fœtal death, in that in a vertex presentation the skull bones overlap owing to the weight of the fœtus, whereas in a breech lie no overlapping of the skull bones need be found, but the tendency is always for the fœtus to become rolled into a ball. If Spalding's sign is relied on alone, fœtal death may be

missed. If it is looked for only as part of the total fœtal flaccidity, fœtal death may be diagnosed more frequently in non-vertex presentations.

PHYSICAL THERAPY.

X Ray Treatment in Carcinoma of the Upper Air Passages.

J. JUUL (*Acta Radiologica*, November, 1938) states that in the years 1931 to 1935, 151 patients with malignant epithelial tumours (sarcoma was not included) of the hypopharynx, rhinopharynx, tonsil, base of the tongue, and larynx were referred to the radium centre in Copenhagen; and that of these, 41, or 27%, remained apparently cured in 1937. The treatment used was protracted fractional deep X ray therapy; only in three cases of tonsil cancer was this supplemented by radium, and in one by electro-surgery. The absolute cure rate after at least five years was six out of 26 cases, or 23%. The calculated tumour doses in the cases in which apparent cure resulted varied between about 3,000 and 4,000 *r*, delivered in 60 to 70 days. The author comes to the conclusion that a treatment time lasting three weeks results in an exudative epidermatitis, which is necessary in order to get tumour disappearance. Further, a treatment time covering four weeks can give results without an exudative skin reaction. Even a longer period of treatment can result in loss of symptoms without an epitheliitis. In order to avert strong skin and mucous membrane reactions and still to obtain satisfactory results it is necessary, as far as is possible, to have a sufficiently long treatment time—up to six weeks or more.

The Treatment of the Lymph Gland Metastases from Carcinoma of the Lips and the Oral Cavity.

R. B. ENGELSTAD (*Acta Radiologica*, December, 1938) reviews all the patients (135 in number) suffering from carcinoma of the oral cavity, who have entered the Norwegian Radium Hospital during the years 1932 to 1935. The material covers a number of very advanced cases in which the patient had practically no chance of being cured. The principal purpose of the review is to elucidate the local effect of the treatment of lymph gland metastases in order to find a better basis for the evaluation of therapeutic methods. Of the 135 patients, 72 had carcinoma of the tongue, and in the other 63 cases the tumour was localized to the gingiva, the palate or the buccal mucosa. During the same period 141 patients suffering from carcinoma of the lip were treated, 73 without and 68 with lymph glands suspected to be secondarily involved. The author comes to the following conclusions: (i) It is possible by radium bomb treatment to cure a certain number of lymph gland metastases from carcinoma of the oral cavity and a rather greater number from carcinoma of the lip. In other cases the metastases may be reduced and perhaps made operable. (ii) On account of the uncertainty of the clinical diagnosis lymph gland metastases should always receive radiotherapy primarily. In the author's series the radium bomb was used. (iii) If the metastases have not disappeared in six to eight weeks after treatment, a block dissection is done. The results from this combined treatment are good. Failure to effect a cure may be due to the fact that gland metastases are advanced and inoperable, that the primary growth is very advanced or that metastases are present in distal organs. (iv) Of prophylactic treatment it is difficult to give a definite opinion. In lip cancers prophylactic treatment may be omitted if the patient is under careful observation. There are good reasons for irradiation of the glandular regions in oral cancer as a prophylactic measure, and the more extended use of this is advocated. Prophylactic block dissection may be justified in oral carcinoma, but does not seem to be necessary in lip carcinoma. Of the total patients, 32·6% of those with carcinoma of the oral cavity were free from symptoms for from two and a half to six years; and the corresponding figure for patients with carcinoma of the lip was 65·2%.

Radiological Treatment of Skeletal Metastases in Mammary Cancer.

H. B. WULFF (*Acta Radiologica*, February, 1939) considers that radiological treatment of bone metastases in mammary cancer is indicated in all cases, even in those with widely distributed skeletal metastases, except when the general condition is very poor, or grave anæmia, pronounced pulmonary pleural or hepatic metastases are present. He reports on a series of 44 cases in which this treatment was used between 1929 and 1937. A simple fractionated treatment was given, the total dose to a field being 750 to 1,500 *r*. Irradiation was given in one or more series to a larger or smaller number of fields, careful control being kept of the general condition, blood and weight of the patients. In 45·5% of the patients treated a good and in certain cases a very striking subjective improvement was noted. This improvement corresponded to discernible changes in the radiographs, namely, sclerosing of the metastatic foci, and in three cases even healing with regression to almost normal bone structure. It appears that those cases which react favourably do so even to small or moderate doses.

Radiological Treatment of Cancer of the Rectum.

E. BERVEN (*Acta Radiologica*, August, 1939) points out that large statistical surveys show that even at present about 50% of cases of carcinoma of the rectum are inoperable at the time the diagnosis is made. The operative mortality is about 25%. At present it seems that the use of surgical treatment alone gives a cure for three years or more in about 10% to 15% of cases. A large number of patients are therefore sooner or later referred for radiotherapy. The majority of cancers of the rectum are of the typical adeno-carcinoma type, which are highly radio-resistant. The radio-sensitivity of the normal rectal mucous membrane and of the tumour cells is so similar that it is difficult to cure the tumour by irradiation alone without the production of necrosis. A small number of rectal carcinomata, however, are composed of undifferentiated cells and are more radio-sensitive. Ano-rectal carcinoma is of two types, one structurally similar to rectal cancer and of the same clinical course, the other resembling cancer of the skin. The treatment technique at the Radiumhemmet, Stockholm, is described. In recent years radium treatment has been restricted to post-operative implantation of radium needles in the site of the excised cancerous polypus or early cancer. Teleradium treatment has been used in a number of ano-rectal carcinomata. The greater number of the series of rectal cancer have been treated by deep X ray therapy, two anterior abdominal and two posterior fields being used. Certain conclusions are given: (i) Early highly differentiated rectal carcinoma suitable for operation should be dealt with by radical surgery without pre-operative radiotherapy. For the undifferentiated types, however, pre-operative deep X ray therapy is indicated, as these tumours are radio-sensitive. (ii) Patients with large operable tumours and all with borderline tumours should have pre-operative radiotherapy. A number of these tumours can be made operable by this means. (iii) Patients with operable tumours who refuse operation or in whom operation is contraindicated should have radiotherapy. (iv) Post-operative radiotherapy after simple excision of a relatively benign and localized tumour may in some instances make a radical operation unnecessary. (v) Recurrences after operation and all inoperable tumours should be treated by radiotherapy if the patient's general health does not contraindicate such a course. Radiotherapy provides an endurable existence for these patients for the rest of their lives, and a certain prolongation of life can be attained. According to several reports, a number of patients have become permanently symptom-free owing to radiotherapy, and in many cases the improvement has been such that a radical operation could be performed and give a permanent cure. (vi) Ano-rectal carcinoma of the skin type should first be treated by radiotherapy. (vii) Results can certainly be improved considerably by development and improvement of the radiotherapeutic technique.

Special Articles on Civilian War Casualties.

XIV.

GUNSHOT WOUNDS OF THE BRAIN.[1]

I MUST begin this paper with the explanation that, although it happened that I gained some experience of the treatment of gunshot wounds of the brain during the Great War, I have not been concerned with the surgery of the central nervous system for many years. It is common knowledge that during this time there have been dramatic advances in this branch of our art, which doubtless will influence the treatment of these injuries in a future war; but I am not competent to explore this aspect of the question, and must content myself with a description of the methods employed in France in 1917 and 1918. During the last years of the War the value of specialization was recognized, and it was the rule to send men suffering from each type of wound, whenever possible, to the group of casualty clearing stations which specialized in its treatment. I was attached for a time to that group of three stations which were responsible for the treatment of head injuries sustained by men of the Fifth Army during the attack on Passchendaele in 1917. Harvey Cushing was also attached to this group, and my description of the technique employed in the treatment of brain injuries is based, naturally enough, on that elaborated and described by Cushing at this time.

The general principles of treatment of gunshot wounds of the brain are identical with those governing the management of wounds elsewhere in the body—namely, operation at the earliest possible moment after infliction of the wound, excision of the damaged tissue and, if possible, removal of all foreign bodies. As soon as possible after admission to hospital, the patient was examined and a brief neurological investigation was made. An X ray picture of the skull was then taken, a step which gives information of the greatest value, not only by localizing the projectile, if present, but also by indicating the extent and direction of in-driving of bone fragments from the shattered skull. Armed with this information the surgeon could proceed to operate. Local anæsthesia was employed as a routine measure, except in an occasional case in which great restlessness made the administration of a general anæsthetic imperative. One hour prior to operation a hypodermic injection of one cubic centimetre of "Omnopon" and scopolamine (Hoffmann-La Roche) was given. The scalp was then completely shaved and the usual skin preparation performed. The injection of the local anæsthetic was made at a suitable distance from the wound in such a manner as to encircle the proposed lines of incision. A small quantity of a 0·5% solution of "Kerocain", to which adrenaline had been added to make the strength of this drug 1 in 10,000, was then injected under the skin, followed by a much larger injection under the pericranium. A wheal about half an inch in height was made by the latter injection, and after it had been completed, it was usually possible to proceed at once to the operation. The use of local anæsthesia made the subsequent steps of the operation easier, not only because there was less hæmorrhage from the scalp and it was easy to alter the position of the patient during the operation, but also because cleansing of the track of the missile was facilitated if the patient was directed to cough gently at a suitable time.

The first step of the operation consisted of excision of the wound in the scalp, which was performed in a thorough manner owing to the belief that, if an infected area was left, it might reinfect the whole suture line. Whenever possible the wounds were excised by inclusion in the course of a straight or curved incision; but when the wound was extensive it was necessary to fashion plastic flaps in order to obtain skin apposition at the end of the operation. Cushing's tripod method was found most useful in such cases, the scalp being mobilized by three incisions radiating, like the legs of a tripod, from the gap left after excision of the wound.

After complete excision of the wound, the next step of the operation involved the treatment of the fracture in the skull. At one time the usual plan was to make a burr opening close to the fracture, and then to expose the dural wound by removing the edges of the broken portion of the skull with a rongeur. Cushing first introduced an alternative method known as "*en bloc*" removal, which consisted in making one or more burr openings as near as possible to the fracture and then in uniting these openings by a rongeur in such a manner that the whole fractured area could be lifted out in one piece. This method had the advantages that it was possible to excise the damaged and infected bone completely and cleanly; that, in fractures over the course of a venous sinus, the whole field was exposed at once by an "*en bloc*" removal, thus permitting of an immediate control of hæmorrhage; and finally, that it was frequently possible to piece together the fragments of in-driven bone like a jig-saw puzzle within the ring of bone removed *en bloc*, thus making sure that all the fragments had been removed from the brain. This method was undoubtedly useful, although it had the disadvantage that in many cases more bone was removed than was absolutely necessary.

The next step in the operation consisted in the operative treatment of the wounds in the dura and the brain. It was not customary to excise the wound in the dura unless this was very ragged, because it was considered desirable, particularly in recent cases, to bring the dural edges together at the end of the operation. The most important part of the operation consisted in thorough cleansing of the wound in the brain. It was found that this was best accomplished by exploration of the wound with a rubber catheter to which was attached a syringe with a glass barrel and a rubber ball top. The bone fragments driven into the brain were localized by exploration with the catheter, and at the same time the wound was gently irrigated, with saline or Dakin's solution, by compression of the rubber ball of the syringe. Some of the smaller fragments were brought to the surface by this irrigation, or by the action of suction produced when the pressure on the rubber ball was released; but larger fragments demanded the use of a sinus forceps for their removal. The projectile, when present, was removed if possible; but it was thought that retained bone fragments were more likely to cause subsequent infection than metallic particles. It was found that a magnet was useful in the removal of portions of metal, though, naturally, this device was not generally available in casualty clearing stations. Throughout this portion of the operation great care was exercised to achieve absolute hæmostasis.

Thorough cleansing of the wound in the brain in this manner naturally demanded the expenditure of considerable time and patience, and it was found that the end results were directly dependent upon the care with which this task was performed. At the same time, it is necessary to point out that if a surgeon adopts this "go slow" policy to a ridiculous extent by spending hours over the surgical treatment of one patient suffering from a brain wound, others similarly afflicted will have to wait for operation for an undue length of time and thus the sum total of his results will be bad.

After completion of the surgical treatment of the wound in the brain, the wound in the scalp was sutured. This was accomplished at first by the use of silkworm gut stitches passing through all the layers of the scalp. It was found that this method involved inaccurate apposition of skin edges, undue compression of the tissues and, in consequence, increased risk of infection of the wound. It was therefore replaced by suture in two layers, the epicranial aponeurosis being approximated by catgut sutures and the skin united by horsehair; the latter sutures were removed on the fourth day.

The use of drainage depended upon the extent of the injury and the degree of infection or, in other words, the

[1] A lecture delivered under the auspices of the Melbourne Permanent Post-Graduate Committee on August 11, 1939.

time which had elapsed since the infliction of the wound. In cases in which the wound was small and operation was performed early, no drainage was required. In more extensive injuries, a glove rubber drain was employed for the first forty-eight hours; but in cases in which the operation was not performed within twenty-four hours of the time of infliction of the wound, it was found that this method of drainage failed to prevent the spread of infection in the wound. Bacteriological examination in such delayed cases at the time of operation usually revealed the presence of anaerobic bacilli, streptococci and numerous other organisms, and in such cases the use of a "B.I.P.P." pack proved more valuable. This pack consisted of a thin strip of gauze soaked in paraffin and then impregnated with bismuth, iodoform and paraffin paste (Rutherford Morrison's formula). This pack was placed lightly in the wound in such a manner that all recesses superficial to the cerebral wound were filled and no dead spaces remained. The wound was then sutured over the pack, one end of which was left protruding through the incision. The pack was removed and a smaller one introduced into the cavity on the third day. Three days later, this smaller pack was removed and the aperture closed by secondary suture or allowed to heal by granulation. It was found that the use of packs in this manner greatly diminished the incidence of infection during convalescence, owing largely to the fact that all dead spaces were obliterated and that, owing to its oily nature, it helped to prevent adhesion of surfaces and subsequent pocketing. It was found that many brain wounds in which there was a severe infection prior to operation healed uneventfully without the development of cerebral hernia when a "B.I.P.P." pack was used.

When the wound had been sutured and the operation completed, a dressing of "B.I.P.P." gauze was applied to the wound. This was changed daily in order that signs of any infective complication could be detected at an early stage in its development. Superficial infections of the scalp were treated by irrigation with Dakin's fluid introduced with a syringe every four hours. The Carrel tube was found unsatisfactory in head wounds because it was frequently pulled out by the patient, and, further, it interfered with the healing of the wound by the pressure it exerted upon it. The most serious complication following brain wounds was the development of a cerebral hernia. The only effective treatment of this condition was prophylactic, and consisted of a thorough and effective cleansing of the wound in the brain at the time of operation. When a rapidly increasing soft cerebral hernia appeared in the wound it usually happened that the patient died of infection, though some of the smaller and more slowly developing herniæ subsided after being dressed with "B.I.P.P." gauze and the application of light pressure by a bandage.

This completes a description of the technique employed in the treatment of gunshot wounds of the brain during the last war, and it may now be of some interest to recapitulate the results which followed this treatment in so far as my personal experience was concerned. These results, which were published by me in 1919,[2] depended upon the severity of the injury to the brain, as will be apparent from Table I.

TABLE I.
Classification of Cranio-cerebral Wounds and Results.

Group.	Description.	Cases.	Deaths.	Percentage.
I	Local depressed fracture of various types with puncture of the dura	12	0	0·0
II	Wounds, usually of gutter type, with depressed bone fragments driven into the brain	21	3	14·2
III	Wounds of penetrating type, with lodgment of projectiles and bone fragments	11	6	54·5
IV	Wounds involving the ventricular system	9	9	100·0
V	Wounds involving both the brain and an air sinus	4	2	50·0
VI	Through-and-through wounds of the skull	6	1[1]	16·6
VII	Wounds involving a venous sinus	4	0	0·0

[1] Two end-results uncertain; patients probably died.

In the first group of cases the cerebral laceration was slight, though it was frequently surrounded by an area of contusion which gave positive signs on neurological examination. The operative technique was not difficult, as there was very little in-driving of bone fragments into the brain, and it was usually possible to suture the wound in the dura. Though some of the patients in this group had sustained rather extensive damage to the skull, there were no deaths—a fact which clearly demonstrates the importance of the cerebral rather than the cranial injury.

When the wound is produced by a projectile travelling at a high velocity and the impact upon the skull is tangential, the bone is shattered into fragments. Some of these are driven into the brain, and though they are not so numerous as is the case in a penetrating wound (see Figure I), the resulting injury may be considerable. It

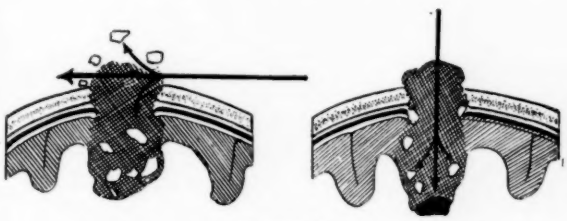

FIGURE I.
(Reproduced from *The British Journal of Surgery.*)
Diagram to illustrate type of in-driving of bone fragments in tangential and penetrating wounds.

is probable that in these cases the result depends to a very large extent upon the skill of the surgeon. If he spends the time required for complete and gentle removal of all the in-driven fragments and takes the trouble to cleanse the wound in a thorough manner, the majority of patients suffering from this type of injury will recover.

The mortality rate following penetrating wounds of the brain with lodgement of the projectile within it, and that resulting from through-and-through wounds of the skull, was in the vicinity of 50%. This is not surprising in view of the severity of the cerebral laceration and, in consequence, the widespread infection associated with wounds of these types. When it happened that the wound involved any portion of the ventricular system the outlook was even worse, as there were few certified recoveries reported in the literature after war wounds of this nature.

In cases in which there were wounds involving both the brain and an air sinus, the difficulties of treatment were increased by the risks of infection from the air sinus. It was found that, when the frontal sinus was involved, it was often possible to suture the dura after cleansing the wound in the brain and thus prevent reinfection from the sinus. In ethmoidal cases, on the other hand, it was difficult to shut off the air sinus in this manner, and in consequence death from meningitis was not uncommon when the ethmoid sinus was involved in the wound.

Attention has already been directed to the importance of an *"en bloc"* removal of the fracture in cases in which an injury to a venous sinus is suspected, because, by the use of this method, the wound in the sinus is freely exposed immediately the bone is lifted out. When the sinus is not completely divided, hæmorrhage can be adequately controlled by the application of a facial or muscle graft; but if this is not effective the sinus must be ligated.

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Melbourne.

References.

(1) H. Cushing: "A Study of a Series of Wounds Involving the Brain and its Enveloping Structures", *The British Journal of Surgery*, Volume V, 1917-18, page 558.

(2) A Newton and A. E. Brown: "A Study of Gunshot Wounds of the Brain", *The British Journal of Surgery*, Volume VII, 1919-20, page 72.

British Medical Association News.

ANNUAL MEETING.

THE annual meeting of the Queensland Branch of the British Medical Association was held in the Physiology Lecture Theatre of the University of Queensland, William Street, Brisbane, on December 8, 1939, DR. NEVILLE SUTTON, the President, in the chair.

ANNUAL REPORT OF COUNCIL.

The annual report of the Council, which had been circulated amongst members, was taken as read on the motion of Dr. S. F. McDonald, seconded by Dr. L. J. Jarvis Nye, and was adopted on the motion of Dr. Milton Geaney, seconded by Dr. Mervyn Patterson. The report is as follows.

The Council has pleasure in presenting the following report of the work of the Branch for the year ended November 8, 1939.

Membership.

The membership of the Branch is 532, as against 527 in 1938, making a gain of 5.

The gains were: new members, 20; transferred from other Branches, 19; member reelected, 1.

Losses have been due to: transfers to other Branches, 13; default in payment of subscription, 8; resignations, 4; deceased, 10.

During the year the Branch has sustained a loss by the death of the following members: Dr. J. O'Neil Mayne, Dr. W. S. Webb, Dr. Æneas J. McDonnell (who were three of our oldest members), Dr. Eustace Russell, Dr. D. E. A. Buchanan, Dr. A. J. Spencer Roberts, Dr. Mark O'Brien, Dr. W. P. Kelly, Dr. J. Morris Roe, Dr. J. J. Delaney.

Of the four resignations of membership, three were due to retirement from practice and one member went abroad.

Meetings.

General.

As usual, in addition to the annual meeting, ten meetings of the Branch were held, two of which were clinical meetings. The average attendance at these meetings was about 30.

Two special meetings were held in connexion with war emergency organization—protection of practices. One was held on Sunday, September 3, when there was an attendance of 173 members, and the other on Sunday, October 29, at which there were 64 members present. The latter meeting was confined to members in private practice.

Council.

Twenty-two ordinary meetings of the Council were held and three special meetings. Two of the special meetings were held to consider the new Medical Bill to amend the *Medical Practitioners' Act*, and at the third meeting war emergency organization—protection of practices—was the subject of discussion.

The record of attendances of members of the Council is as follows:

	Ordinary.	Special.
Dr. Neville G. Sutton (President and Honorary Librarian)	17	2
Dr. C. E. Wassell (President-Elect)	20	1
Dr. R. G. Quinn (Past President and Hon. Treasurer)	17	3
Dr. Horace W. Johnson (Hon. Secretary)	22	3
Dr. D. Gifford Croll (Chairman of Committees and Federal Council Representative)	21	3
Dr. L. H. Foote (Hon. Secretary of Sub-Committees)	18	1
Dr. Basil L. Hart (Councillor)	18	2
Dr. H. W. Horn (Councillor)	21	1
Dr. F. W. R. Lukin (Councillor)	15	2
Dr. S. F. McDonald (Councillor)	10	—
Dr. H. S. McLelland (Councillor)	18	2
Dr. A. Eric Mason (Councillor)	18	3
Dr. Mervyn S. Patterson (Councillor)	16	2
Dr. T. A. Price (Vice-President of the Branch, Federal Council Representative and Councillor)	22	—
Dr. W. J. Saxton (Councillor)	3	—
Dr. J. L. Selwood (Councillor)	20	2
Dr. J. G. Wagner (Councillor)	20	3
Dr. L. P. Winterbotham (Councillor)	20	2

Scientific.

February.—Clinical Meeting combined with the Mater Misericordiæ Children's Hospital Clinical Society.

March.—Dr. Ellis Murphy: "Modern Interpretation of the Heart Sounds."

March 31 (in lieu of April).—Dr. Kenneth Wilson: "Experiences in Investigation of Sterility."

May.—Dr. E. D. Ahern: "Safety in Surgery of the Colon."

June.—Sir Alan Newton: "Making Medical Men" (Joseph Bancroft Memorial Lecture).

July.—Professor G. Shedden Adam: "Uterine Inertia and Contraction Ring Dystocia."

August.—Dr. Noel M. Gutteridge and Dr. Milton Geaney: "Pathology and Surgery of Blood Transfusion."

September.—Professor H. J. Wilkinson: "Bearers of the Torch" (Jackson Lecture).

October.—Clinical meeting combined with the Brisbane Hospital Clinical Society.

November.—Dr. K. B. Fraser: "Hare Lip and Cleft Palate."

The following is the personnel of the committee responsible for the arrangement of the programme of papers: Dr. Mervyn Patterson, Dr. A. Eric Mason and Dr. B. L. Hart and the *ex officio* members of the Council.

On August 9, 1939, members of the Branch were invited to a lecture given in connexion with the annual meeting of the Queensland Section of the Royal Australasian College of Surgeons, when a paper was delivered by Professor J. V. Duhig on "Bone Marrow".

Office-Bearers.

Election of Vice-President.—In recognition of the valuable services rendered to the Branch by Dr. T. A. Price, a resolution was unanimously passed at the last annual meeting, appointing him as Vice-President of the Queensland Branch of the British Medical Association.

Dr. C. E. Wassell was elected President-Elect for the ensuing year, and Dr. Horace W. Johnson was re-elected Honorary Secretary.

The following office-bearers were elected by the Council:

Honorary Treasurer: Dr. R. G. Quinn.

Chairman of Committees: Dr. D. Gifford Croll.

Honorary Secretary of Committees: Dr. L. H. Foote.

Honorary Librarian and Curator of Museum: Dr. Neville G. Sutton.

Assistant Honorary Librarian: Dr. Konrad Hirschfeld.

Councillors.

No change took place in the personnel of the Council during the year.

Dr. H. S. McLelland and Dr. W. J. Saxton, who have been members of the Council for the past two years, are not offering themselves for reelection this year. The Council desires to express its appreciation of their services in the past.

Ethics Committee.

At the annual meeting of the Branch held on December 10, 1938, the following were re-elected members of the Ethics Committee: Dr. Alex. H. Marks, Dr. G. P. Dixon, Dr. G. W. Macartney, Dr. Gavin H. Cameron. The name of Dr. M. Graham Sutton was added to the personnel. No matters have been submitted to the Ethics Committee during the year.

Library.

During the year 130 books have been borrowed from the library by 38 members.

A bound volume of an obituary of the late Dr. W. N. Robertson has been added to the library, a copy of which was also presented to the University of Queensland for its library.

A number of medical journals, of which we had duplicate copies, have been given to the library of the Medical School.

The Medico-Legal Society of Victoria has kindly presented us with a copy of its Proceedings for 1937-1938.

We are also indebted to the Melbourne Post-Graduate Committee for a copy of "Lectures on the Anæmias and Vitamin Deficiencies" by Dr. William B. Castle.

Representation.

The Branch was represented as follows during the year:

Council of the British Medical Association: Professor R. J. A. Berry.

Representative Body Annual Meeting, July, 1939: Dr. Henry Robinson.

Federal Council of the British Medical Association in Australia: Dr. T. A. Price, Dr. D. Gifford Croll.

Australasian Medical Publishing Company Limited: Dr. D. Gifford Croll.

Medical Officers' Relief Fund (Federal): Queensland Committee, Dr. D. Gifford Croll, Dr. J. Cameron Hemsley, Dr. G. P. Dixon.

Queensland Medical Board: Dr. D. Gifford Croll, Dr. R. G. Quinn, Dr. Kenneth Wilson.

Queensland Post-Graduate Committee: Dr. S. F. McDonald, Dr. E. S. Meyers, Dr. Alex. Murphy, Dr. N. W. Markwell, Dr. Ellis Murphy, Dr. Neville G. Sutton.

Queensland Cancer Trust: Dr. B. L. W. Clarke, Dr. G. W. Macartney.

Queensland Nutrition Council: Dr. P. A. Earnshaw, Dr. Noel M. Gutteridge.

Queensland Bush Nursing Association: Dr. L. Bedford Elwell.

Standards Association of Australia: Dr. E. O. Marks.

Standards Association of Australia, X Ray Equipment Sub-Committee: Dr. B. L. W. Clarke.

Tenth Australian Cancer Conference: Dr. E. W. Casey.

Australian Aerial Medical Services: Dr. J. G. Wagner.

Red Cross Society Blood Transfusion Service Committee: Dr. Milton Geaney.

Health Inspectors' Association of Australia, Queensland Branch, Annual Conference (Townsville): Dr. V. F. O'Neill.

The Surf Life Saving Association of Australia, Queensland State Centre: Dr. F. W. R. Lukin.

Physical Fitness Association of Queensland: Dr. E. S. Meyers, Dr. Harold Crawford.

The Editor of THE MEDICAL JOURNAL OF AUSTRALIA was represented by Dr. Joyce S. Stobo.

Subcommittees.

Hospital.

Personnel: Dr. F. W. Lukin, Dr. L. P. Winterbotham, Dr. J. G. Wagner, Dr. W. J. Saxton, and the *ex officio* members of the Council.

Nineteen meetings have been held during the year. Matters concerning nineteen country hospitals were dealt with, in addition to subjects of general interest, some of which are as follows.

Amended Hospital Policy.—Certain principles were drawn up which it was considered should be incorporated in any hospital policy. Copies were circulated to the Federal Council and to the other Australian Branches and to the local medical associations affiliated with the Branch in Queensland. This subject was fully discussed at a conference of country members held in May.

Staffing of Hospitals in Sparsely Populated Areas.—The Minister for Health and Home Affairs, the Honourable E. M. Hanlon, was interviewed in connexion with this question, and it has also been discussed with representatives of the Australian Aerial Medical Services and other interested persons, but no finality has yet been reached.

Anæsthetic Fees for Public Hospitals.—In reply to an inquiry the Council gave a ruling regarding the fees for general anæsthetics administered by a member as anæsthetist to a public hospital, namely, £2 2s. for major operations and £1 1s. for minor operations.

Wondai Hospital.—In May last, at the request of the Council, Dr. T. A. Price paid a visit to Wondai with regard to the medical services of the district, in view of alternative proposals which were to be placed before the Minister for Health and Home Affairs.

During his visit, Dr. Price interviewed the medical men in the district and other interested persons, and endeavoured to bring about a mutually satisfactory settlement of the position.

Among the matters of general interest which also received consideration were the following: classification of public and private hospital patients, domiciliary treatment, suburban out-patient clinics under the Brisbane and South Coast Hospitals Board.

Organization.

Personnel: Dr. J. G. Wagner, Dr. H. S. McLelland, Dr. F. W. Lukin, Dr. S. F. McDonald, and the *ex officio* members of the Council.

This subcommittee was previously known as the Rules and Ethical Subcommittee.

Twenty-three meetings were held during the year, and many matters of general interest were considered and recommendations made to the Council. The following are some of the subjects upon which the Council subsequently took action.

Date of Closing the Branch's Year.—It was decided to alter the date of the closing of the year of the Branch from November 15 to November 8.

Amendments of By-Laws.—During the year the following by-laws have been altered: "By-Law Number 4—"Members Subscriptions", By-Law Number 69—"Country Representation—Local Associations" have been amended, and By-Law Number 41—"Name Plates" and By-Laws Numbers 71 to 76—"Federal Council of the British Medical Association in Australia" are in process of alteration.

Collection of Medical Fees from the Estates of Deceased Patients.—Legal advice was obtained on this question, wherein it was pointed out that a doctor is not in any more favourable position than other creditors.

Medical Evidence.—The matter of doctors in "one-man" towns being called upon at short notice to give evidence was taken up with the Department of Justice, with the result that instructions have been issued by the Commissioner of Police to the effect that they are to be given sufficient notice to enable them to secure the services of a *locum tenens* to act for them during their absence.

Medical Certificates and Professional Secrecy.—The Public Service Commissioner was approached regarding the issue of medical certificates on behalf of the Public Service which require the nature of the illness to be stated by the medical practitioner. The Commissioner stated that he thinks the regulation is a sound one and that it should be maintained.

Treatment of Electric Shock.—The question of the period during which artificial respiration should be continued was

further investigated through the Parent Body of the British Medical Association. The opinion was expressed that, as a routine measure, the duration should be until *rigor mortis* sets in.

Poisons Regulations.—The views of the Branch were requested by the Department of Public Health on continuing the present restriction or permitting the free sale of "Bromural" Knoll. The composition of the drug was investigated, and a reply was sent to the effect that it is considered it should be retained on the restricted schedule.

Representations were made to the Department of Public Health, as a result of which the drugs β-aminoprophylbenzene and para-aminobenzene-sulphonamide have been added to the Poisons Schedule Number 1 and to the list of drugs in Poisons Regulation Number 21.

Medical Appointments.—Adverse reports were received from two members who had accepted medical appointments outside Australia on behalf of trading companies. It was decided to add to the "Important Notice" column of THE MEDICAL JOURNAL OF AUSTRALIA: "Any contracts for service outside Australia." Information was received to the effect that in one of the places concerned the population consisted of 14 whites and 90 to 100 natives. Members are asked not to accept such appointments without making the fullest investigation of the conditions. Steps were also taken to inform members of the conditions of service with regard to an appointment offering in another State, as they were not considered satisfactory.

Re Honorary Medical Officer to Kindergarten Association.—The following ruling has been given by the Council:

1. Members of the British Medical Association may hold the position of honorary medical officer to free kindergartens.
2. No member should hold the position of honorary medical officer to kindergartens which do not come under the category of free kindergartens, but he may be a member of the committee and give what advice he pleases.

It was also considered that routine medical examination of the children and compiling of health forms are not part of the duties of an honorary medical officer.

The Surf Life Saving Association of Australia.—As a result of a conference between the two organizations, Dr. F. W. R. Lukin has been appointed liaison officer between the Queensland Branch of the British Medical Association and the Queensland State Centre of the Surf Life Saving Association of Australia. Dr. Lukin has also been appointed medical adviser to the latter organization.

Proposed Compulsory Raising of School-Leaving Age.—The President was asked by the Director-General of Health and Medical Services to present a report on this subject, and a subcommittee was appointed to consider the matter. A report was subsequently referred to the Director-General of Health by the President.

Terms and Conditions of Service of Medical Officers Employed in the Public Service.—A meeting of medical officers employed in Public Services was held in February to consider a report drawn up by a subcommittee of the Federal Council.

Medical Practitioners Act.—A Bill "To Consolidate and Amend the Law Relating to Medical Practitioners and the Control of the Practice of Medicine, and for other purposes" was presented to Parliament in September and was subsequently passed. A number of suggested amendments were submitted by the Council, the majority of which were in the interest of the public. Unfortunately, none of the important suggestions were accepted.

One vital point was the omission of a clause to provide legal protection to medical practitioners who are required under the new Act to supply certain information regarding patients. This matter is still under discussion by the Council with the responsible authorities.

The new Act also provides for the appointment of a Medical Assessment Tribunal, to be composed of a Judge of the Supreme Court and two medical practitioners.

It is most important that all members should make themselves fully conversant with the provisions of the new Act.

The Medical Board of Queensland.—In response to a request, a reply was received stating that it has been decided by the board to inform the Branch Council of charges made against medical practitioners and the finding of the board in relation to such charges.

Name Plates at a Hotel.—A ruling was given by the Council that there would be no objection to a member putting up a name plate at a hotel, particularly if he resides at the hotel.

Assistance to Widows of Members.—As no medical benevolent fund exists in Queensland, the Council sanctioned funds being opened by a private committee to assist the widows of two deceased members. Both cases were most deserving of help. One fund has been closed and the amount collected has been handed to the member's widow. The second fund is still in operation, and Dr. S. F. McDonald and Dr. J. G. Wagner have the matter in hand.

Income Tax Deductions.—Information regarding deductions allowable to doctors was revised by an accountant, and is available to members who make inquiries on the subject.

Public Education.

Personnel: Dr. P. A. Earnshaw, Dr. F. W. R. Lukin, Dr. H. S. McLelland, Dr. L. J. J. Nye, Dr. C. E. Wassell, Dr. Noel M. Gutteridge, and the *ex officio* members of the Council.

The main activity of the committee this year has been the preparation of a series of dramatized health talks, broadcast weekly (Tuesday, 11 a.m.) from Station 4BH, entitled "Healthward Ho". These broadcasts, before release, receive, according to the rules, the official *imprimatur* of the British Medical Association, Queensland Branch, and of the Pharmaceutical Society of Queensland.

Indications suggest that they are being accorded a widespread public interest. If any member considers that there is any special medical subject on which public education is desirable, an indication, with the necessary material, would be welcomed by the Medical Editor of the Branch. If the subject has already been covered, he will be sent a copy of the broadcast for his comments.

Also this year, following precedent of 1937 and 1938, the committee contributed a statement for publication in the annual "*Courier-Mail* Nutrition Supplement", drawing attention to the value of the nutrition movement to constructive medicine.

The pamphlets on "Adequate Nutrition during Pregnancy and Nursing" are still available at the office of the Branch. Fifty-six dozen were sold to members during the year.

Lodge.

Personnel of Subcommittee: Dr. J. G. Wagner, Dr. L. P. Winterbotham, Dr. H. W. Horn, Dr. J. L. Selwood.

This committee met on four occasions during the year.

There is also a joint committee which is comprised of three representatives each of the Branch and of the Friendly Societies' Medical and Hospital Council. The Branch representatives are Dr. T. A. Price, Dr. F. W. R. Lukin and Dr. A. E. Mason. During the year five meetings were held.

The agreement made in 1934 between the Queensland Branch of the British Medical Association and the combined friendly societies of the Brisbane district (under the Friendly Societies Medical and Hospital Council), together with the institution of a joint committee representing both parties, has brought about a spirit of real cooperation.

The Friendly Societies Council has issued a very useful booklet to lodge members, explaining the details of the lodge medical service.

Negotiations are now commencing with the object of extending throughout Queensland this close cooperation between the friendly societies and the British Medical Association. This matter is also being considered for the whole of Australia by the Federal Council of the British Medical Association.

Lodge medical work is simply part of ordinary medical practice and, like everything human, it can be improved. The continued success and the continued improvement of the lodge medical service depend upon the extent to which the age-old traditions of medicine are honoured and upon the friendly cooperation of the friendly societies.

Capitation Fee, Metropolitan Area.—In accordance with the agreement, the capitation fee for the metropolitan area was increased to 27s. *per annum* as from July 1, 1939. This increase was announced through the Government Statistician's office in conformity with a rise in the Queensland nominal wage index.

Fees for Injection Treatment to Lodge Patients.—Fees were fixed as follows: injections, excluding material, 5s.; intramuscular injections, excluding material, 5s.; varicose veins £1 1s., with a limit of three injections.

Protection of Lodge Members on the List of a Deceased Medical Officer.—This matter is under consideration, and a proposal has been drawn up to be submitted to the lodge representatives before adoption. Something of a similar nature will be necessary to protect the lodge patients on the lists of medical officers mobilized for war service.

Conference of Country Members.

On May 31 last, in accordance with the amended by-law dealing with local associations, the first annual conference of the Council and country members was held at B.M.A. House. There was a good attendance of country members, but not all the local associations were able to send a delegate.

The main subject of the meeting was a discussion on the hospital policy of the Branch, which was favourably received.

It is felt by the Council that such annual conferences will provide a valuable liaison between the Council and country members, and will enable an exchange of views which will lead to a better understanding of the general and local problems that arise from time to time. Next year it is hoped that all local associations will be represented.

The Editor of THE MEDICAL JOURNAL OF AUSTRALIA was present at the conference by invitation of the Council.

Medical Fees Tribunal.

This is a standing committee, the personnel being as follows: Dr. D. Gifford Croll, Dr. C. E. Wassell, Dr. G. P. Dixon, Dr. H. S. McLelland and Dr. S. F. McDonald, with power to coopt.

Two cases were dealt with during the year. In one case the verdict was given, after careful investigation, that the fee charged by the doctor was fair and just. In the second case the verdict was against the doctor concerned, and he was personally censured by the Council for charging what was considered to be an excessive fee.

Rules of procedure have been compiled for the Medical Fees Tribunal, which were drawn up with the assistance of Dr. F. W. R. Lukin.

War Emergency Organization—Protection of Practices.

At a special general meeting of the Branch held on Sunday, September 3, which was attended by 173 members, the following resolution was carried unanimously:

> That this meeting endorse the principle of Units being formed for equality of sacrifice and the protection of medical practice, as suggested by the Council of the Queensland Branch of the British Medical Association.

During the progress of the meeting news came to hand that Great Britain had declared war against Germany. It was resolved that a message of loyalty be conveyed to the Prime Minister of Australia and through him to the Crown.

Two schemes have since been submitted for consideration and adoption as a means of giving financial assistance to members who volunteer for military service in the war.

The first is based on the scheme put forward by the Federal Council whereby members who are mobilized for military service receive assistance from their local colleagues who form a group and contribute through a pool. It is considered that this system would suit groups from which one-third or more of its members are mobilized.

In the metropolitan area and some surrounding districts, a contributory scheme is being introduced, which is in the form of a trust deed drawn up legally. The agreement is to be administered by trustees and signed by contributing members. Under the agreement mobilized members should receive amounts in proportion to the number of their dependants. The amount to be paid to mobilized members and the amount that can be demanded from contributors are subject to very definite limitation. It is estimated that up to 20% will represent the number of mobilized members in the metropolitan area and the scheme does not become operative until 120 members have signed the agreement. This is a concrete means of helping mobilized members and the burden is equably divided.

Dr. Alex. Marks has been nominated as Chairman of Trustees and the other trustees nominated are Dr. R. G. Quinn, Dr. J. G. Wagner, Dr. R. A. G. Malcolm and Professor J. V. Duhig.

A considerable amount of work has been done by the sub-committee and numbers of meetings were held in order to devise a scheme which would provide assistance of a tangible nature and yet not be too great a burden on the members contributing. The subcommittee appointed by the Council was as follows: Dr. R. G. Quinn, Dr. H. S. McLelland, Dr. C. E. Wassell and Dr. L. P. Winterbotham. District committees were also appointed which conferred from time to time with the Council subcommittee.

Copies of the proposed scheme were sent to local associations and to members making inquiries.

With the object of assisting members who are engaged in war service, it has been decided that, from time to time, the Branch will insert in the metropolitan daily Press a notice to the effect that arrangements have been made to carry on the practices of British Medical Association members while they are engaged in military duty. It will also be stated that patients may obtain information by inquiring at the surgery of the doctor, at the office of the British Medical Association, or at the surgery of any other British Medical Association member. Members who are mobilized have been requested to notify the office without delay what arrangements they have made for carrying on their practice.

The principles laid down by the Federal Council in respect of the obligations of the profession to its members who are, or who have been on military service, were reaffirmed by the Council, and have been circulated to members.

It has been decided by the Council to approach Federal and State Government departments, hospital boards, friendly societies *et cetera*, and request that all new and interim medical appointments during the war be made for a period not exceeding one year, and the Federal Council has also been asked to take action on similar lines.

Coordination of the Medical Services of the Commonwealth.—A State committee has been formed which includes representatives of the Branch in its personnel. Dr. J. G. Wagner and Dr. Horace W. Johnson have been appointed to represent the Branch.

National Health Insurance.

The introduction of national health insurance by the Commonwealth Government has been postponed. Although the issue is in abeyance, a great amount of valuable information was gathered through the investigations carried out both by the Association and by the Federal Government. Many fallacies which were held to the detriment of the medical profession have been dispelled.

Since the shelving of national health insurance, proposals have been put forward for voluntary medical contributory schemes but nothing decisive has been adopted.

National Health Insurance Emergency Fund.

A total amount of £1,657 15s. 6d. was subscribed by members of the Branch towards the expenses incurred in

regard to national health insurance. The number of members who contributed was 302, of whom 90 subscribed the full amount of £10 10s. requested.

Affiliated Local Associations.

Downs and South-Western Medical Association.

The thirteenth annual general meeting of the local association was held on September 16, 1939.

Meetings.—During the year just concluded eight monthly general meetings were held and two Executive Committee meetings.

Particulars of the general meetings are as follows:

At the last annual general meeting Dr. Alex. Murphy gave an address on the "Treatment of Early Pulmonary Tuberculosis, with Special Reference to Artificial Pneumothorax". In October, 1938, Dr. L. J. J. Nye spoke on the subject of "Group Practice", in November, Dr. N. W. Markwell lectured on the subject of "Colitis". In February, 1939, Dr. Graham Sutton's subject was "Non Venereal Infections of the Genito-Urinary System". In March, Dr. Athol Quayle gave a paper on "Nasal Accessory Sinusitis". In April, Dr. Milton Geaney spoke on "Hernia", in May Dr. Alan Lee gave two short papers on "Head Injuries" and the "Radical Surgical Treatment of Duodenal Ulcer", and in June a combined meeting with the Local Dental Association was held, at which Dr. K. B. Fraser spoke on the subject of "Harelip and Cleft Palate".

Several additional meetings were arranged, but for various reasons were unable to take place as had been arranged.

The lectures given were much appreciated, and our Association is greatly indebted to the above gentlemen and to the Queensland Post-Graduate Committee for making their services available.

The number of our financial members is 23, as against 16 during the previous year.

The Financial Statement for the year is presented and shows a credit balance for the year of £41 7s. 1d.

Our thanks are again due to the Toowoomba Hospitals Board for making accommodation available for our monthly general meetings, and to Dr. T. A. Price for allowing us to hold committee meetings at his rooms.

JOHN G. HULME,
Honorary Secretary.

Bundaberg Local Association.

The annual meeting of the above association was held on May 28, 1939, and Dr. Egmont Schmidt was unanimously elected as President for 1939-1940.

The meeting was followed by an inaugural dinner, at which Dr. W. H. Nette, Biggenden, and Dr. Frank Hatcher, Childers, were guests. Dr. Nette addressed the members on the question of the administrative control of country hospitals.

Acting on advice from the Queensland Branch, the private practitioners formed a unit under the War Emergency Organization Scheme on September 14.

DAVID BARRY,
Honorary Secretary.

Townsville Local Association.

At a meeting of the local association held on September 5, 1939, the following office-bearers were elected: President, Dr. W. B. Chapman; Honorary Secretary and Treasurer, Dr. W. J. Chapman.

There were five meetings held during the year at which various matters were discussed.

W. J. CHAPMAN,
Honorary Secretary.

North Coast Medical Association.

Since taking over the secretaryship in June of this year, the only activity of the local association has been a meeting of the local practitioners with the representatives of the lodges following the letter *re* increasing the adult capitation fee from 25s. *per annum* to 28s. *per annum*. Following the meeting, representatives of the lodges stated that the lodges would agree to the increase of 3s. if the practitioners were adamant, but would appreciate a reduction of the increase from 3s. to 2s., as this could be met without having to impose an additional levy on the members. This was agreed to, so an amicable settlement was reached in which the local adult capitation fee was increased from 25s. *per annum* to 27s. *per annum*, the fee for single members to be adjusted accordingly.

S. E. WARRINER,
Honorary Secretary.

Mackay Local Association.

The following office-bearers were elected at the inaugural meeting held in September, 1938: President, Dr. C. E. Williams; Vice-President, Dr. E. W. Chenoweth; Honorary Secretary, Dr. Paul Hopkins.

Six meetings have been held and various matters discussed, particularly relating to national health insurance.

The following papers were read: "Midwifery in the Tropics", by Dr. C. E. Williams; "Diet", by Dr. E. W. Chenoweth; "Renal Pain and its Investigation", by Dr. Paul Hopkins; "Rest", by Dr. Robert Grant.

At one meeting a very interesting set of films on "Cellona and Elastoplast" technique was shown.

A meeting has been arranged with the representatives of the lodges to discuss fees. This meeting has not yet been held.

PAUL HOPKINS,
Honorary Secretary.

Central Western Local Association.

There are no activities of the local association to report, as, owing to distances between practices and the fact that most are one-man towns, regular meetings are impossible.

The Honorary Secretary, Dr. C. V. Watson Brown, has been very good in ringing up members when there has been anything to discuss relative to the common good of all the members, but that is so far as we have been able to go.

H. W. HARBISON,
Acting Honorary Secretary.

Queensland Post-Graduate Committee.

Annual Report, 1938-1939.

Personnel: Chairman, Dr. S. F. McDonald; Vice-Chairman, Dr. A. V. Meehan; Honorary Secretary and Treasurer, Dr. Norman Sherwood; Dr. Alex. Murphy, Dr. E. S. Meyers, Dr. Neville G. Sutton, Dr. N. W. Markwell, Dr. Ellis Murphy, Dr. P. A. Earnshaw, Dr. J. R. S. Lahz, Dr. F. J. Booth, Dr. L. A. Little, Dr. C. E. Wassell, Dr. Alex. E. Paterson, Dr. C. E. Tucker, Professor H. J. Wilkinson, Professor D. H. K. Lee, Professor J. V. Duhig, Dr. Alan E. Lee, Dr. J. F. Dunkley.

Meetings.—Nine meetings of the committee were held during the year.

Honorary Secretary.—Dr. Norman Sherwood was reappointed Honorary Secretary and Honorary Treasurer.

Week-End Course.—A week-end course was held on Saturday, and Sunday, November 5 and 6, 1938. The visiting lecturer, Dr. George Willcocks, gave an excellent address on "Coronary Sclerosis and Occlusion". The membership of the course was 25.

Annual Post-Graduate Course.—The course was held from May 29 to June 3. The membership totalled 78, which included 14 country members. Visiting lecturers were Dr. A. J. Collins, Dr. Ivor Hotten and Sir Alan Newton, who also delivered the Joseph Bancroft Memorial Lecture. This year one set lecture and two clinical demonstrations were given by Dr. Collins and Dr. Hotten.

The dance held on May 31 at the Belle Vue Hotel was a great success and enjoyed by all those who were present. This function is increasing in popularity each year, which is substantially due to the efforts of the Honorary Secretary of the Entertainment Committee, Dr. Noel Gutteridge.

Lectures.—The following lectures were arranged during the year:

Dr. W. B. Castle, Thorndyke Memorial Laboratories, Boston, and City Hospital Massachusetts, United States of America, delivered two lectures in September, 1938:

1. Diagnosis and treatment of anæmias.
2. Hæmorrhage diseases.

Fifty-three members took advantage of the opportunity of attending the two lectures. Copies of the lectures by Dr. Castle are being published, and a number were ordered on behalf of members.

Professor C. G. Lambie, of Sydney University, who was passing through Brisbane in October last, was kind enough to accept an invitation to deliver a lecture on the subject of "Recent Advances in Medicine".

Dr. R. A. O'Brien, C.B.E., of the Wellcome Physiological Research Laboratories, London, gave a most interesting lecture on July 12, 1939, on "Immunity, Serums and Vaccines". The lecture was very well attended and much appreciated.

Country Lectures.—Arrangements were made for lecturers from Brisbane to be sent to Ipswich Clinical Society, the Downs and South-Western Medical Association and the South Burnett Local Association. At the request of the North-Eastern Local Association of New South Wales, a lecturer was sent to their annual meeting.

Finance.—It will be noted from the balance sheet that there is a credit of £251 14s. 4d. in the Commonwealth Savings Bank. This year's course resulted in a credit balance of £71.

General Practitioner Group.

Personnel: President, Dr. L. P. Winterbotham; Honorary Secretary and Treasurer, Dr. F. W. R. Lukin; Dr. J. G. Wagner, Dr. H. W. Horn, Dr. J. L. Selwood; *ex officio*, Dr. T. A. Price and Dr. D. Gifford Croll.

The General Practitioner Group reports that its representatives on the Council have been kept very busy with various matters which intimately concerned their interests. The national health insurance campaign is a matter of past history, and the war will probably defer any launching of a like effort for some time to to come; on the other hand, it only wants a particular turn of political events to precipitate the socialization of many services and, for the sake of the welfare of the community and the upholding of the efficiency of medical works towards the public, medical men must do their utmost to see that no schemes are put into effect that will in any way lower the standard of their work.

As Dr. Mervyn Patterson was unable to continue to act as the general practitioner representative of the Branch on the Federal National Health Insurance Committee, Dr. L. P. Winterbotham was appointed in his stead. Appreciation of the services rendered by Dr. Patterson has been recorded.

The consideration and production of a sound scheme for the financial assistance of the British Medical Association members who are sacrificing much in volunteering to serve abroad, and, to a lesser degree, at home, have taken much thought and time. It is hoped that the plan produced will meet with general approval and, though not pretentious, will yet prove a very definite help to those away from their practices.

A further effort to have adopted throughout the State a similar scheme concerning lodge affairs, which is giving very general satisfaction throughout the metropolis, is at present on the eve of being made. Dr. Price has been at great trouble to collect data from all over Australia, and is hopeful that a comprehensive medical service may be ultimately introduced per medium of the lodges. General practitioners should remember that it was incontestably proved from evidence brought before the recent Royal Commission that lodge service is a concessional one and that the maximum average amount received per service was 3s., whereas the minimum average amount received for each service in private practice was 6s.

A new Medical Act has recently come into force, and all medical men would be well advised to make themselves conversant with its contents.

The group is hopeful that general practitioners will make certain that their interests are adequately protected by continuing to return their nominees at all Council elections.

Sections for Special Branches of Medical Knowledge.

Eye, Ear, Nose and Throat Section.

(Inaugurated in 1924.)

The following is a report of the Queensland Branch of the Eye, Ear, Nose and Throat Section for the year 1939.

Office-Bearers.—President, Dr. T. M. Mansfield; Vice-President, Dr. Ainslie Clowes; Councillor, Dr. F. Garrett Scoles; Auditor, Dr. J. W. Ralston; Honorary Secretary and Treasurer, Dr. Athol Quayle.

Meetings of the Section were held on March 21 and September 19. Cases were exhibited and discussed. The annual meeting will be held at the British Medical Association rooms on November 21, 1939.

Obstetrical Section.

(Inaugurated on November 15, 1927.)

This section has been disbanded and the meetings are now arranged by the Clinical Society of the Brisbane Women's Hospital.

The records which have been collected over a period of years by the Obstetrical Section are being preserved for reference purposes.

Radiological Section.

(Inaugurated in March, 1930.)

A meeting was held on September 28, 1939, at Wickham Terrace to consider the appointment of a representative from the Section on the X Ray Equipment Subcommittee of the Queensland Branch of the Standards Association of Australia.

Dr. B. L. W. Clarke was proposed for such, and accepted.

This was the only meeting and no expenditure was incurred for the year.

Ophthalmological Society of Australia.

(Queensland Section.)

Three meetings of the Queensland Branch of the Society have been held during the current year. The following office-bearers were elected for the year 1939: Chairman and State Representative, Dr. E. J. McGuinness; Honorary Treasurer, Dr. W. Lockhart Gibson; Honorary Secretary, Dr. F. Garrett Scoles.

Cases of interest to members were shown at various meetings and fully discussed.

Dr. E. O. Marks showed an interesting series of cases of trachoma treated in one eye by 4% solution of mercuric perchloride in glycerine, the opposite eye, as a control, being treated by usual methods. The results were satisfactory, but inconclusive regarding the advisability of adopting the newer form of treatment advocated by Dr. Gault, of Melbourne.

Three sound films, the property of the National Ophthalmic Treatment Board of Great Britain, were shown by courtesy of Messrs. Fox Films at their studios. These served to illustrate what is being done in the Mother Country to educate the public in care of the eyes and prevention of disease.

The Chairman, Dr. E. J. McGuinness, who was absent in Canada and the United States of America for a period of some months, gave an interesting address on his return. He demonstrated the operation of keratoplasty according to a modification of the technique of Castroviejo and displayed the various instruments used for this purpose. The same speaker also demonstrated the O'Connor "Cinch" method of dealing with strabismus.

The desirability of establishing facilities for orthoptic treatment in Queensland has been engaging attention, and

steps are to be taken to extend ophthalmic practice to include this branch of the specialty.

Owing to the inauguration of the society as an Australian body with a local State branch, it was deemed desirable by members to sever association with the combined Eye, Ear, Nose and Throat Section of the British Medical Association, Queensland Branch.

The annual meeting of the society was held in Melbourne during April last, and was well attended by members from all States.

Queensland, in the absence of the official State representative abroad, was represented at the Council meetings by the Branch Secretary.

The meeting was an unqualified success in every respect, and was attended by two visiting lecturers: Miss Ida Mann, of London, and Dr. Aaron Green, of San Francisco. The former, representing the parent society of Great Britain, is a world renowned authority on developmental anomalies of the eye, and the latter is a well-known ophthalmic surgeon associated with the ophthalmic clinic in San Francisco which bears his name.

The proceedings of this meeting have been fully reported upon in the columns of THE MEDICAL JOURNAL OF AUSTRALIA.

The Joseph Bancroft Memorial Lecture.

Sir Alan Newton delivered the Joseph Bancroft Memorial Lecture for 1939, on June 2, at the lecture theatre of the Medical School, under the title "Making Medical Men". As usual, representatives of the Board of Faculties of the University of Queensland and of the Royal Society were invited. As it was considered the subject of the lecture would be of interest, invitations were also extended to the Premier, the Minister for Health and Home Affairs, the Director of Education and members of the Senate of the University, and to senior medical students. In addition, there was an attendance of 66 members of the Branch.

The lecture was thoroughly enjoyed by those who were privileged to hear it, and, at the conclusion, a vote of thanks to the lecturer was moved by Dr. S. F. McDonald, seconded by Dr. E. D. Ahern, and carried unanimously.

The Joseph Bancroft Memorial Medal was presented to Sir Alan Newton by the President.

The Jackson Lecture.

The 1939 Jackson Lecture was delivered by Professor H. J. Wilkinson, on September 1, at the lecture hall of the Medical School, the title being "Bearers of the Torch". The members of the Senate and staff of the University of Queensland and senior medical students were invited to be present.

At the conclusion a hearty vote of thanks was carried to the lecturer for his interesting address on personalities and incidents of the past, in keeping with the subject of medical history usually chosen for the Jackson Lecture.

British Medical Agency of Queensland, Proprietary Limited, and Queensland Medical Finance, Proprietary Limited.

The two annual meetings of these companies were held on October 24, 1939, when a successful year was reported. Members of the Branch continue to take advantage of the services offered, and the number making use of such facilities has shown a marked increase during the past twelve months. The provision of service to members was the reason for the inauguration of these ventures, and it is felt that they have fully justified their existence.

A great deal of the success has been due to the personal effort of Mr. S. N. Cobbold, who is manager and secretary respectively of these companies, and the Council has pleasure in recording its appreciation of his services.

Federal Council.

Dr. T. A. Price and Dr. D. Gifford Croll represented the Branch at the two meetings of the Federal Council which were held on March 14 and September 6.

Dr. T. A. Price has been appointed to represent the Branch on the Contract Practice Subcommittee of the Federal Council.

An important by-law of the Federal Council has been amended during the year, which reads as follows:

> To meet the general and other expenses of the Federal Council, the Treasurer of each Branch shall pay to the Federal Council such sums as the Federal Council may require, provided that the total so payable in any year shall not exceed a sum equal to ten shillings per member of the Branch.

Previously the amount payable per member by the Branches was limited to two shillings *per annum*. An amount of six shillings has been called up this year.

Australasian Medical Congress (British Medical Association).

In view of the outbreak of war, it has been decided to cancel the date of the holding of the Sixth Session, which had been set down for 1940 in Perth.

The Medical Journal of Australia.

The Editor of THE MEDICAL JOURNAL OF AUSTRALIA, Dr. Mervyn Archdall, paid an official visit to the Branch in May last, and at the Council's invitation he attended the conference of country members held on May 31, 1939, and took part in the discussion on the various subjects which were under consideration. The annual visit of the Editor provides a welcome opportunity of making personal contact with him.

The University of Queensland.

Appointment to the Senate.

In February last Dr. E. D. Ahern was elected to the Senate of the University of Queensland to fill a vacancy caused by the untimely death of Dr. Eustace Russell, who had occupied the position for only a few months prior to his death on November 23, 1938.

Eustace Russell Memorial Fund.

It was decided by the Council to invite subscriptions towards a fund to be used to perpetuate the name of the late Dr. Eustace Russell. The fund was also open to persons outside the medical profession, as it was thought that many of his friends would welcome the opportunity thus given. With the approval of the Senate, the amount subscribed is to be used for an annual prize to be awarded to medical students. A recommendation has been made that the first prize be awarded in 1940 to the student obtaining the best results in clinical medicine in the final year of the medical course.

Medical School.

The ceremony of the opening of the Medical School building by the Honourable W. Forgan Smith, Premier of Queensland, took place on August 11, 1939. Dr. Neville G. Sutton, President of the Branch, supported a vote of thanks to the Premier.

The Branch is indebted to the University authorities for making the lecture theatre at the Medical School available on several occasions for the holding of meetings.

Dr. James O'Neil Mayne, who died on January 31, 1939, left the majority of his estate to the Medical School of the University of Queensland. Previously the late Dr. Mayne had presented the site at St. Lucia, where the new University of Queensland is now being built.

With reference to the Medical School, Dr. Mayne's will provides that the bequest is to be used particularly for the following purposes: purchase of equipment for the use of the Medical School; establishment and maintenance of chairs of medicine and surgery; endowment of medical research work; and the granting of scholarships within the Medical School. The trustees under the will are Dr. Arnold W. Robertson, Dr. Charles F. Marks and Mr. J. H. Lalor, a solicitor.

British Medical Association Medical Students' Loan Fund.

This fund now stands at £174 3s. 6d. It is administered by the Council of the Queensland Branch, and is to be used to assist medical students who are well advanced in their course and who are in financial difficulties.

Medical Officers' Relief Fund (Federal).

Assistance was rendered to the widow of a deceased member who served in the Great War. This fund is available only for those medical officers incapacitated or dying of war disabilities due to the late war, or for assistance to their dependants.

The Local Committee for Queensland is as follows: Dr. D. Gifford Croll, Dr. G. P. Dixon and Dr. J. Cameron Hemsley.

Congratulations.

During the year letters of congratulation were sent to Dr. G. A. C. Douglas on the honour of Officer of the Most Excellent Order of the British Empire which was conferred upon him by His Majesty the King, and to Dr. C. V. Watson Brown on his election to the Queensland State Legislature as an Independent member.

Finance.

It will be noted from the balance sheet that the year's operations have resulted in a credit balance of £251 13s. 2d. Over £100 extra has been paid to the Federal Council in accordance with an amendment of its by-laws. It is regretted that it has not been possible to make any provision for an organization fund, which is most necessary. Forty-one members have not paid their subscriptions for the current year.

Social.

The President and members of the Council, prior to the Joseph Bancroft Memorial Lecture, on June 2, entertained at dinner the following guests at the Belle Vue Hotel: Sir Alan Newton, Dr. A. J. Collins, Dr. Ivor Hotten, Dr. E. D. Ahern and Dr. Norman Sherwood.

For the fourth successive time the medical bowlers have won the cup presented by Messrs. Bosch, Barthel and Company, in competition with the dental and pharmaceutical professions.

The Wilca Dental Company Limited has kindly presented a trophy for a golf contest between doctors, dentists and chemists. The doctors have been successful in winning the first match against the dentists, but it has not been possible to arrange the match with the chemists this year.

Conclusion.

The Council wishes to place on record its appreciation of the work of the Honorary Secretary (Dr. Horace W. Johnson), the Secretary (Mrs. Spooner) and her office staff during the year.

As can be gathered from the report, there has been a great deal of work done this year, which started in the throes of a National Health Insurance Commission and has ended in the turmoil of war.

(Signed) NEVILLE G. SUTTON,
President.

FINANCIAL STATEMENTS.

The Honorary Treasurer presented the financial statements, which were taken as read on the motion of Dr. W. Crosse, seconded by Dr. Milton Geaney; their adoption was moved by Dr. Ellis Murphy, seconded by Dr. H. McLelland. The statements are published herewith.

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

Statement of Receipts and Payments (General Fund) for Twelve Months ended November 15, 1939.

RECEIPTS.	£ s. d.	£ s. d.
November 16, 1938.		
To Credit Balance at English, Scottish and Australian Bank Limited, Brisbane ..	1,913 18 3	
„ Cash in Hand	11 9 0	
		1,925 7 3
November 15, 1939.		
To Subscriptions—		
For remittance to British Medical Association, London	676 7 9	
For remittance to THE MEDICAL JOURNAL OF AUSTRALIA, Sydney	532 5 0	
Queensland Branch Subscriptions	305 6 5	
Organization Fund, Queensland Branch	963 12 0	
		2,477 11 2
„ Rent from B.M.A. House, Wickham Terrace		34 0 0
„ Sundry Receipts		24 16 10
„ Australasian Medical Publishing Company Limited—Interest on Debentures, £55 at 5% *per annum*, 12 months to June 30, 1939		2 15 0
		£4,464 10 3

PAYMENTS.	£ s. d.	£ s. d.
November 15, 1939.		
By British Medical Association, London: Amounts remitted to London on account of subscriptions collected		655 13 9
„ Australasian Medical Publishing Company Limited, Sydney: Amounts remitted to Sydney on account of subscriptions to THE MEDICAL JOURNAL OF AUSTRALIA collected		517 3 6
„ Library Expenditure		50 9 8
„ Dr. T. A. Price—Expenses visit to Wondai		10 1 6
„ Federal Council—Contribution to General Expenses		158 5 3
„ Branch Expenses—		
Salaries, Audit and Honoraria	£469 0 6	
Printing and Stationery ..	46 11 8	
Electric Light	8 15 2	
Telephone	42 4 11	
Bank Charges	2 4 0	
Stamps and Telegrams ..	39 17 8	
Insurance: Fire and Workers' Unemployment and Compensation	5 8 2	
Council and General Meeting Expenses, Balopticon Operator and Sundries ..	27 3 8	
Legal Expenses	6 1 4	
		647 7 1
„ Payments on account of B.M.A. House, Wickham Terrace—		
Repairs and Maintenance	11 2 5	
Cleaning	77 13 10	
		88 16 3
„ Credit Balance at English, Scottish and Australian Bank Limited, Brisbane ..		2,336 4 2
„ Cash in Hand		0 9 1
		£4,464 10 3

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

Balance Sheet as at November 15, 1939.

LIABILITIES.	£ s. d.	£ s. d.
British Medical Association, London—Balance, Subscriptions Account		62 2 9
Australasian Medical Publishing Company Limited, Sydney		47 16 6
English, Scottish and Australian Bank Limited, Brisbane—Overdraft, Building Fund Account		1,572 14 3
Loan from Queensland Medical Land Investment Company Limited		1,900 0 0
Loans from Members repayable May 15, 1943	£3,047 10 0	
Interest Accrued to November 15, 1939	74 11 7	
		3,122 1 7
Reserve—Dinners, Entertainments *et cetera*		31 17 2
Sinking Fund		320 13 0
Accumulation Account—Balance at November 16, 1938	£1,931 2 10	
Add Surplus of Income over Expenditure 12 months ended November 15, 1939	251 13 2	
		2,182 16 0
		£9,240 1 3

ASSETS.	£ s. d.	£ s. d.
Freehold Property, "B.M.A. House", 225 Wickham Terrace, Brisbane (*less* Depreciation on Building to November 15, 1939)		2,764 0 0
B.M.A. Rooms, Wickham Terrace, Brisbane—Library, Bookcases, Furniture, Lantern, Typewriters *et cetera*		286 15 0
Museum Specimens		5 0 0
Queensland Medical Land Investment Company Limited—5,950 shares of £1 each, paid to 10s. each, at cost		2,975 0 0
British Medical Agency of Queensland Proprietary Limited—257 shares of £1 each, fully paid, at cost		257 0 0
Australasian Medical Publishing Company Limited, Sydney—Two debentures of £25 each and one of £5		55 0 0
Sinking Fund Investments—Australian Consolidated Inscribed Stock—3¾%, 1951—£280, at cost	£278 3 3	
Commonwealth Savings Bank, Brisbane — Credit Balance, Current Account	42 9 9	
		320 13 0
Sundry Debtors		234 0 0
City Electric Light Company Limited—Deposit Account		6 0 0
English, Scottish and Australian Bank Limited, Brisbane—Credit Balance, General Fund Account		2,336 4 2
Cash in Hand		0 9 1
		£9,240 1 3

We have examined the above Balance Sheet and have obtained all the information and explanations we have required.

In our opinion the Balance Sheet is properly drawn up to exhibit a true and correct view of the state of the Association's affairs as at November 15, 1939, according to the best of our information and the explanations given us, and as shown by the books of the Association.

ROY G. GROOM & CO.,
Chartered Accountants (Aust.),
Auditors.

Brisbane,
November 17, 1939.

R. G. QUINN,
Hon. Treasurer,

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

Building Fund Statement of Receipts and Payments for Twelve Months ended November 15, 1939.

RECEIPTS.	£ s. d.	PAYMENTS.	£ s. d.
November 15, 1939.		November 16, 1938.	
To Rents from B.M.A. House, Wickham Terrace	154 0 0	By English, Scottish and Australian Bank Limited, Brisbane—Debit Balance	1,439 6 11
„ English, Scottish and Australian Bank Limited, Brisbane—Debit Balance	1,572 14 3	November 15, 1939.	
		By Rates, Land Tax, Insurance and Maintenance—B.M.A. House, Wickham Terrace	134 12 6
		„ Payments on account of interest	152 4 10
		„ Bank Account Fee	0 10 0
	£1,726 14 3		£1,726 14 3

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

Revenue Account for Twelve Months ended November 15, 1939.

EXPENDITURE.	£ s. d.	£ s. d.
November 15, 1939.		
To Library Expenditure	50 9 8	
„ Branch Expenses	624 11 5	
„ Federal Council—Contribution to General Expenses	158 5 3	
„ Depreciation on Furniture, Bookcases, Fittings, Typewriters *et cetera*	15 10 0	848 16 4
„ Expenses, B.M.A. House—Rates, Land Tax, Insurance, Repairs and Sundries	145 14 11	
Cleaning	77 13 10	
Interest on Loans from Members	152 7 6	
Depreciation, Building	66 0 0	
	£441 16 3	
Less Rents	266 0 0	175 16 3
„ Accumulation Account—Profit for year transferred		251 13 2
		£1,276 5 9

INCOME.	£ s. d.	£ s. d.
November 15, 1939.		
By Branch and Organization Fund Subscriptions	1,268 18 5	
„ Australasian Medical Publishing Company Limited—Interest on Debentures	2 15 0	
„ Sundries	4 12 4	1,276 5 9
		£1,276 5 9

ELECTION OF OFFICE-BEARERS.

The President announced the result of the election of office-bearers and members of the Council.

President: Dr. C. E. Wassell.

President-Elect: Dr. J. G. Wagner.

Past President: Dr. Neville G. Sutton.

Honorary Secretary: Dr. Horace W. Johnson.

Councillors: Dr. D. Gifford Croll, Dr. L. H. Foote, Dr. Basil L. Hart, Dr. H. W. Horn, Dr. Alan E. Lee, Dr. F. W. Lukin, Dr. S. F. McDonald, Dr. A. Eric Mason, Dr. Ellis Murphy, Dr. Mervyn Patterson, Dr. T. A. Price, Dr. R. G. Quinn, Dr. J. L. Selwood, Dr. L. P. Winterbotham.

ETHICS COMMITTEE.

On the motion of Dr. Kenneth Wilson, seconded by Dr. A. Quayle, Dr. Alex. H. Marks, Dr. G. P. Dixon, Dr. G. W. Macartney, Dr. Gavin H. Cameron and Dr. M. Graham Sutton were appointed as members of the Ethics Committee.

INDUCTION OF PRESIDENT.

Dr. Neville G. Sutton then inducted Dr. C. E. Wassell to the chair. Dr. Sutton said that Dr. Wassell's appointment at this time was particularly fitting.

PRESIDENT'S ADDRESS.

Dr. C. E. Wassell then read his address (see page 1).

DR. NEVILLE SUTTON, from the chair, said that discussion on a presidential address was unusual; but the war was an unusual war and the address was an unusual address.

COLONEL MACARTNEY congratulated Colonel Wassell on his paper. He said that it was difficult to bring out all the points for the regimental medical officer and to follow them up; but this officer and the ambulance officer to be should study Colonel Wassell's book. Army books were hard to obtain, and so references were difficult to follow. Colonel Macartney said that he had wished to discuss with the medical officers the examinations of recruits, so he and Colonel Wassell had decided to do it at this meeting. There had been nearly 7% of rejections; the other States had seemed to do slightly better than this. When the cause for this large number of rejections was sought, some mitigating circumstances were found. The area staffs were not ready in some cases when they were rushed into examinations, and accommodation was not good; and in these areas a large number of failures occurred. These accounted for many of the rejections. As Colonel Wassell had said, there was also the factor of leniency to the man who had volunteered. A few officers were outstanding in having passed a number of men who were rejected at the second examination. These rejections covered a large field; quite a number of subjects with varicose veins had been passed who were later rejected. Some of the conditions that were passed were such that the subjects were perfectly fit for civil life but not for camp life; these conditions included hydrocele, varicocele, short stature, flat feet, loss of finger, elevated blood pressure and obesity, and *hallux valgus*. Twenty men had been passed suffering from hernia, some herniæ being large and some small. Three men had had only one eye, and there had been ten cases of albuminuria, and so on.

Colonel Macartney went on to say that the medical man should fill in the whole of the recruit's history, as the orderly could not always get all such facts, and frequently the medical man did not read the whole history. It was necessary that medical officers should endeavour to write all medical words and their own signatures legibly. All these things seemed small matters; but they all accumulated and came back to Colonel Macartney. Some confusion had arisen over the distinction between men whose height was five feet four inches and who were to be examined but not called up, and those whose height was five feet five inches, and who were to be accepted. When the compulsory quota was called up, medical officers would find that instead of men wanting to get into the army, as had been the case, they would not want to get into it, and the examining officers would have to be very careful.

In his address Colonel Wassell had stressed the fact that the relations between the medical officer and the commanding officer must show coordination, tact and common sense, so that the necessary measures would be taken; the medical officer must realize that he was not the only person who knew anything about sanitation and hygiene.

DR. MILTON GEANEY said that he wished to make a few remarks. He referred first of all to the acceptance of men who were under height. He had been told that it was the duty of the area officer to decide on the height, and the medical officer had been asked only to say whether the patient was physically fit. Secondly, with regard

to overweight, Dr. Geaney said that the man weighing sixteen stone whom he had examined did hard work. He was a dairy farmer, and Dr. Geaney had come to the conclusion that he could stand up to army life. With regard to the man under weight, Dr. Geaney knew him and knew that his low weight was due to the fact that he had been receiving rations for twelve months; but he considered that after a few weeks in camp the man would gain in weight and be physically fit. Dr. Geaney realized that all these extra examinations cost the country money. Dr. Geaney inquired how one could find out about camp sanitation and whether there was anyone who could give lectures; he himself knew nothing about grease traps *et cetera*.

PROFESSOR D. H. K. LEE mentioned several things about the mass examination of recruits which might be useful. When the urine was tested, 50% of specimens showed traces of sugar; both Fehling's test and Benedict's test had been used. The same had occurred next day. The only circumstance that might account for this was that these men had recently been inoculated. There had been no febrile reaction at the time, but it was considered that this must be the cause; so two or three days later the tests were made again, and this time there was no trace of sugar. The physiological explanation was that there was a heavy creatinuria following fever.

Professor Lee thought that frequently if one small defect was found in a man, for example, varicose veins or high blood pressure, one would find two or three things wrong. It was the same in industrial accidents, in which 60% of the accidents occurred among 10% of the personnel.

DR. S. F. MCDONALD said that he was glad to hear Colonel Wassell stress again the fact that on the regimental medical officer depended not only the health of the troops but their mental stamina and a large part of their ability to stand up to warfare. He must gain the confidence of the rank and file and improve their morale. Dr. McDonald remembered an excellent physician who could not establish any of the contact that helped to make the excellent soldier.

One thing necessary in the regimental medical officer was the ability to pick out the nervous soldier; the man who suffered from shell-shock was the man who already had the affected nervous system. Ordinary persons could stand shell-shock fairly well, but when it came to the nervous people, the question arose whether it was better to try to weed them out or to let them be excellent soldiers till the crash came. Those who suffered from all sorts of small disorders which detained them in hospital for a large part of the time should be weeded out if possible.

DR. HAROLD CRAWFORD asked on what standard were lordosis and flat feet classed as deterrents, as both were sometimes normal in people.

DR. A. E. MASON said that it was stated that the regimental medical officer was the backbone of the regiment. The general practitioner was said to be the backbone of the profession and was trained in hospital to fit him for this position. The regimental medical officer received very little training and went into camp knowing nothing about sanitation. This should be rectified if, as Colonel Wassell had stressed, it was his duty to prevent men from becoming sick as much as to treat them when ill.

DR. GIFFORD CROLL congratulated Colonel Wassell on his all-embracing address. He said that the duties of the regimental medical officer sounded rather alarming. He was glad to hear Colonel Wassell lay stress on the importance of cooperation between the medical officer and the commanding officer. Dr. Croll thought that the regimental medical officers did not realize that they should give reports to the commanding officer daily and also keep copies of these; they need not be complaints, but reports of anything that seemed necessary or that would add to the health of the regiment or brigade, or of anything that might be a possible future cause of disease. Dr. Croll was on the board for reexamination, and each recruit's case was considered thoroughly before he was rejected. Most of the rejections were for varicose veins and defects of the extremities, fingers missing on the right hand, stiff elbows and joints; many of these were kept out of sight. There were different standards for judging varicose veins. There were very few cases of glycosuria, and there were very few rejections on account of raised blood pressure. Dr. Croll considered that the medical officers were asked to carry out too many examinations in a day; thirty was a satisfactory number, and a board of two could complete sixty in a day.

The table of stores and equipment could be used only as a guide, and in the field medical officers should ask for what they wanted. Of course one should not ask for ridiculous things; but there were many things that could be asked for and obtained. As Colonel Wassell had said, one could improvise and one was expected to; but there must be material to improvise with, and if it was not available it must be asked for.

DR. J. L. SELWOOD said that he had with Benedict's test found glycosuria in some recruits; these were made to come up when sober, and tests were then without result.

DR. DONALD CAMERON said that at present there were two schedules for the examination of recruits, one for the Australian Imperial Force and one for the militia. There were some differences and he would like these defined.

Colonel Wassell, in reply, said that in Australia disabling flat feet were very rare. Scoliosis in a slight degree would not be a cause for rejecting a man, but lordosis would.

Dr. Geaney and Dr. Mason should realize that they could not learn a war job in peace time and that disarmament had been responsible for the cutting down of the staffs. One must do one's best. Colonel Wassell advised them to borrow books on the subject, though there were not many available. Courses of training for medical officers were being established early in the New Year.

VOTES OF THANKS.

Dr. R. G. Quinn moved a vote of thanks to Dr. Wassell for his address; this was carried by acclamation.

Dr. Ernest Culpin moved a vote of thanks, which was carried by acclamation, to the Council for their work during the year.

Post-Graduate Work.

SPECIAL COURSE FOR MEDICAL OFFICERS OF DEFENCE FORCES.

A SPECIAL course for the medical officers of the defence forces and their reserves has been arranged by the New South Wales Post-Graduate Committee in Medicine. The programme is as follows.

Monday, January 8, 1940.

(At the Prince Henry Hospital.)

10 a.m.—"Injuries to Joints", Dr. Wilfred Vickers.

11.15 a.m.—"Amputations and Compound Fractures"; demonstration of plaster splints and artificial limbs, Dr. Wilfred Vickers.

2 p.m.—"Wound Infections: Tetanus and Gas Gangrene", Dr. E. Thomson.

3 p.m.—"Clinical Features and Surgical Treatment of Wound Infections", Dr. H. R. G. Poate.

4 p.m.—"Brain Injuries", Dr. H. R. G. Poate.

Tuesday, January 9, 1940.

(At the Department of Anatomy, Old Medical School, University of Sydney.)

9.15 a.m.—"Anatomy of Head, Arm and Abdomen", the staff of the department of anatomy.

2.15 p.m.—"Anatomy of Chest, Leg and Hand", the staff of the department of anatomy.

Wednesday, January 10, 1940.

(At the Prince Henry Hospital.)

9.15 a.m.—"The Sulphonamides", Dr. S. A. Smith.
10 a.m.—"Heart Conditions", Dr. S. A. Smith.
11.15 a.m.—"Cardio-Vascular Diseases", Dr. S. A. Smith.

(At the Department of Anatomy, Old Medical School, University of Sydney.)

2.15 p.m.—"Anatomical Sections, Dissections and Specimens", the staff of the department of anatomy.

Thursday, January 11, 1940.

(At the Prince Henry Hospital.)

9.15 a.m.—"Practical Work in Typing and Administration of Blood", Dr. E. Thomson and Dr. B. Jones.
2 p.m.—"Anæsthesia", Dr. H. J. Daly and Dr. W. I. T. Hotten.

Friday, January 12, 1940.

(At the Prince Henry Hospital.)

9.15 a.m.—"Infections of the Upper Respiratory Tract", Sir Charles Blackburn.
10 a.m.—"The Early Diagnosis of Tuberculosis", Dr. Cotter Harvey.
11.15 a.m.—"Psychiatry", Professor W. S. Dawson.
2 p.m.—"Abdomen, Chest and Abdomino-Thoracic Injuries", Dr. George Bell.

Monday, January 15, 1940.

(At the Prince Henry Hospital.)

9.15 a.m.—"Venereal Diseases", Dr. Norman Gibson.
10 a.m.—"Scabies and Other Skin Conditions", Dr. A. Dawson.
11.15 a.m.—"First Aid Treatment of Facio-Maxillary Injuries", Professor A. J. Arnott.
2 p.m.—"Infectious Diseases", Dr. N. J. Symington.

Tuesday, January 16, 1940.

(At the School of Public Health and Tropical Medicine, University of Sydney.)

An all-day session will be conducted by the staff, including Dr. A. H. Baldwin, Dr. W. C. Sawers and Professor Harvey Sutton.

Wednesday, January 17, 1940.

Morning.—At the School of Public Health and Tropical Medicine, University of Sydney.
2.15 p.m.—At the Pathology Museum, New Medical School, University of Sydney: Demonstration of war specimens, Professor K. Inglis and Dr. H. R. G. Poate.

Thursday, January 18, 1940.

An all-day session will be conducted at the School of Public Health and Tropical Medicine, University of Sydney.

Friday, January 19, 1940.

An all-day session will be conducted at the School of Public Health and Tropical Medicine, University of Sydney.

During the fortnight beginning February 5, 1940, a similar course will be held, so that persons may attend any part of the first course and complete it in the second.

The courses are open to all members of the medical profession without fee, but the committee reserves the right to limit the numbers attending.

Application to attend the course should be made to the Secretary, New South Wales Post-Graduate Committee in Medicine, the Prince Henry Hospital, Little Bay, Sydney.

Correspondence.

SOME OBSERVATIONS ON SCIATICA.

SIR: It is with considerable interest that I have read in the current issue of the journal the observations on sciatica by Dr. Norman Little, written from the standpoint of the orthopædist; and I am surprised that one of the most common causes of sciatica has received such scant attention.

During the last two years in the physiotherapy department of the Royal Melbourne Hospital I have been struck with the large number of cases of sciatica which are due to fibrositis. So large is this group that I would place it as certainly one of the commonest causes.

Some of these cases start as a lumbago, which spreads downwards and later involves the sciatic nerve. This extension can often be prevented by prompt treatment.

In other cases a fibrositis of the gluteal muscles gives rise to the sciatic syndrome.

In the treatment of this fibrositic group, comprising search for foci and medication, physiotherapy is important, consisting of heat and massage. The type of massage necessary is of a deep kneading character, and the usual rubbing of a kindly relative is useless here, where the services of a trained masseur are invaluable.

Of the forms of heat I strongly prefer short-wave therapy, realizing the importance of correct dosage.

I agree with Dr. Little that in acute cases this, like diathermy, may aggravate the condition, and here infra-red is often preferable; and massage has to be deferred till later.

In chronic cases, with limitation of movement, I have seen heat combined with gradual stretching exercises restore function and sometimes obviate forcible manipulation.

In conclusion, may I state that I have thoroughly enjoyed Dr. Little's article, and have only striven here to draw attention to a common condition, which can usually be rapidly and effectively treated.

Yours, etc.,

41, Spring Street, Melbourne,
December 18, 1939.

LEIGH T. WEDLICK.

Obituary.

ANNIE WINIFRED WINDMILL.

WE regret to announce the death of Dr. Annie Winifred Windmill, which occurred on December 16, 1939, at Newtown, Geelong, Victoria.

ALEXANDER VIGORS BENSON.

WE regret to announce the death of Dr. Alexander Vigors Benson, which occurred on December 24, 1939, at Adelaide, South Australia.

Notice.

WE have been informed by Dr. P. Fiaschi that the memorial to the late General T. H. Fiaschi, D.S.O., V.D., Commendatore of the Crown of Italy, will be unveiled by Dr. Robert Scot Skirving at the Waverley Cemetery on Thursday, January 11, 1940, at 5 p.m. Brief addresses will be given by Dr. Robert Scot Skirving, Mr. Oscar Meyer and Mr. R. C. Davis, President of the New South Wales Branch of the Australian Wine Producers' Association.

If it is raining heavily the ceremony will be postponed until the following Thursday at the same time. Those attending are asked not to bring flowers.

Corrigendum.

AN error has occurred in the article entitled "Pyelitis and Pyelonephritis from the Surgical Point of View", by Dr. M. S. S. Earlam, which was published in the issue of December 23, 1939. At page 934 the first sentence should read: "After two blood transfusions nephrostomy was carried out under cyclopropane anæsthesia."

Nominations and Elections.

THE undermentioned has applied for election as a member of the Victorian Branch of the British Medical Association:

Wise, Daniel, M.D., 1936 (Pisa), Warrnambool Base Hospital, Warrnambool.

The undermentioned has been elected a member of the Victorian Branch of the British Medical Association:

Esser, Alfred Adolf, L.R.C.P. and S. (Edinburgh), L.R.F.P.S. (Glasgow), 1937, 53, Williamstown Road, Footscray.

The undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Clarke, Marcus Carlyle, M.B., B.S., 1937 (Univ. Sydney), Keningan, via Jesselton, British North Borneo.

Warburton, Colin, M.B., B.S., 1937 (Univ. Sydney), c.o. Dr. Hyam M. Owen, 57, Darlinghurst Road, King's Cross.

Tonge, John Iredale, M.B., B.S., 1939 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

The undermentioned has applied for election as a member of the South Australian Branch of the British Medical Association:

North, William Ian, M.B., B.S., 1939 (Univ. Adelaide), Port Broughton.

The undermentioned has applied for election as a member of the Western Australian Branch of the British Medical Association:

Arndt, Edward Wilford, M.R.C.S. (England), L.R.C.P. (London), 1923, 250, St. George's Terrace, Perth.

Diary for the Month.

JAN. 8.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
JAN. 9.—New South Wales Branch, B.M.A.: Council Quarterly.
JAN. 9.—Tasmanian Branch, B.M.A.: Branch.
JAN. 10.—Queensland Branch, B.M.A.: Council.
JAN. 24.—Victorian Branch, B.M.A.: Council.
JAN. 24.—Queensland Branch, B.M.A.: Council.
JAN. 26.—Tasmanian Branch, B.M.A.: Council.
FEB. 1.—South Australian Branch, B.M.A.: Council.
FEB. 6.—New South Wales Branch, B.M.A.: Organization and Science Committee.
FEB. 7.—Victorian Branch, B.M.A.: Branch.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser", pages xvi-xix.

ADELAIDE CHILDREN'S HOSPITAL, ADELAIDE, SOUTH AUSTRALIA: Honorary Officers, Resident Medical Officer.

CAIRNS HOSPITALS BOARD, CAIRNS, QUEENSLAND: Medical Superintendent.

DEPARTMENT OF PUBLIC HEALTH, WESTERN AUSTRALIA: Medical Officers.

MACKAY HOSPITALS BOARD, MACKAY, QUEENSLAND: Assistant Medical Superintendent, Resident Medical Officer.

QUEEN'S MEMORIAL INFECTIOUS DISEASES HOSPITAL, FAIRFIELD, VICTORIA: Junior Resident Medical Officers.

SYDNEY HOSPITAL, SYDNEY, NEW SOUTH WALES: Honorary Officers.

THE PRINCE HENRY HOSPITAL, LITTLE BAY, SYDNEY, NEW SOUTH WALES: Medical Officers.

THE QUEEN VICTORIA MATERNITY HOSPITAL, INCORPORATED, ADELAIDE, SOUTH AUSTRALIA: Resident House Surgeon.

THE UNIVERSITY OF MELBOURNE, VICTORIA: Lecturer in Physiology, Lecturer in Pathology.

YALLOURN MEDICAL AND HOSPITAL SOCIETY, YALLOURN, VICTORIA: Assistant Medical Officer.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCHES.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 135, Macquarie Street, Sydney.	Australian Natives' Association. Ashfield and District United Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Leichhardt and Petersham United Friendly Societies' Dispensary. Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney. North Sydney Friendly Societies' Dispensary Limited. People's Prudential Assurance Company Limited. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	Associated Medical Services Limited. All Institutes or Medical Dispensaries. Australian Prudential Association, Proprietary, Limited. Federated Mutual Medical Benefit Society. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17.	Brisbane Associate Friendly Societies' Medical Institute. Proserpine District Hospital. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.
SOUTH AUSTRALIAN: Secretary, 178, North Terrace, Adelaide.	All Lodge appointments in South Australia. All Contract Practice Appointments in South Australia.
WESTERN AUSTRALIAN: Honorary Secretary, 205, Saint George's Terrace, Perth.	Wiluna Hospital. All Contract Practice Appointments in Western Australia.

Editorial Notices.

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Further particulars may be obtained from the undersigned.

Applications will close on Wednesday, 10th January, 1940, at 12 noon.

C. J. M. WALTERS,
General Medical Superintendent and Chief Executive Officer.

THE Proprietors of the following Australian Patent, No. 17,505 dated 31st December 1927, for "METHOD OF OBTAINING GLAND EXTRACTS" (Parke Davis & Co.), are prepared to take any and all such action as may be necessary in order that the requirements of the public may be fully satisfied in accordance with the provisions of Section 87 of the Patents Act.

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Further particulars and conditions of each of the above appointments may be obtained from the undersigned, with whom applications must be lodged not later than January 15, 1940.

Applications are also invited, to be lodged with the undersigned by January 6, 1940, for the following part-time appointments in the Pathology Department:

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Details of the duties of these officers may be obtained on application to the Professor's Secretary, Pathology Department.

JOHN F. FOSTER, Registrar.

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